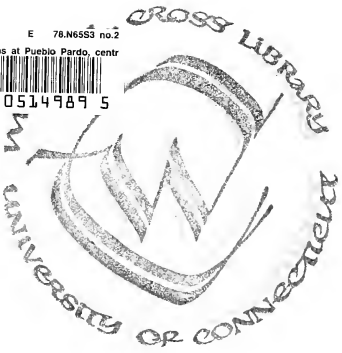
hbl, stx E 78.N65S3 no.2
Excavations at Pueblo Pardo, centr
3 9153 00514989 5



E
78
N65
S3
no.2

Digitized by the Internet Archive
in 2011 with funding from
LYRASIS members and Sloan Foundation

http://www.archive.org/details/excavationsatpue1960toul

Digitized by Google

169

EXCAVATIONS AT PUEBLO PARDO

by

Joseph H. Toulouse, Jr.

and

Robert L. Stephenson

THE MUSEUM OF NEW MEXICO • SANTA FE, NEW MEXICO

Number 2 Papers In Anthropology June, 1960

EXCAVATIONS AT PUEBLO PARDO:

Central New Mexico

by

Joseph H. Toulouse, Jr.

and

Robert L. Stephenson

Santa Fe, N.M. THE MUSEUM OF NEW MEXICO · SANTA FE, NEW MEXICO

Number 2 Papers In Anthropology June, 1960

Table of Contents

List of Illustrations

Introduction

Pueblo Pardo (Grey Town) is a modest-sized, stone-masonry ruin on Chupadero Mesa in central New Mexico. Archeological investigations in this area have been included in several long-range programs extending over the past eighty years. In the six years from 1880 to 1885 Adolph F. Bandelier visited and recorded prehistoric Indian village remains throughout the American Southwest. As a part of this first, systematic survey of Southwestern archeology, he visited the general area of Chupadero Mesa and commented on a number of ruins, including Pueblo Pardo (Bandelier, 1892).

Bandelier's classic reports were published in the 1890's, but no further archeological work was carried on in central New Mexico until the School of American Research and the Museum of New Mexico undertook excavations in the ruins of Gran Quivira, Quarai, and Abo. The first of these excavations was a single season of work in 1913 at the ruin of Quarai (Hewett, 1917). Through the 1920's, the investigations of the School and the Museum accelerated in this area, concentrating at the ruin of Gran Quivira (Hewett, 1923, 1924 a, 1924 b, 1925, 1926, 1927; Halseth, 1926; Bloom, 1927). Research continued through the 1930's with work at the ruin of Abo (Toulouse, 1938, 1940, 1949), and through both the 1930's and 1940's at the ruin of Quarai (Senter, 1934; Ely, 1935; Baker, ms., Hurt and Dick, 1946).

Early in 1940, with the appointment of the senior writer as Custodian of Gran Quivira National Monument, plans were formulated for an intensive archeological survey of the area immediately adjacent to the National and State Monuments, as a part of the work of the National Park Service, U. S. Department of the Interior. The survey was to supplement one made several years before by Dr. H. P. Mera and Stanley A. Stubbs for the Laboratory of Anthropology. Many previously unrecorded sites were located by this survey, but much remained, and still remains to be done. For example, an unrecorded site only three miles from Gran Quivira was uncovered in a natural gas pipeline trench in 1953, after the pipeline archeologists had already examined the proposed easement (Wendorf, Fox, and Lewis, Editors, 1956, p. 226). The survey, in 1940, did suggest some specific problems, however, that formed a basis for a program of excavation. The following year a means of accomplishing that program was presented.

The R. E. Allen-Washington and Jefferson College Expedition was organized in the spring of 1941. Mr. R. E. Allen of Los Angeles, California, had purchased the site of the ruin of Pueblo Pardo, which lay but three miles south of Gran Quivira, and deeded it to his alma mater, Washington and Jefferson College, located in Washington, Pennsylvania. Mr. Allen and the College planned to establish a field school for Washington and Jefferson students and to conduct intensive and extensive archeological investigations each summer in central New Mexico, beginning with excavations at Pueblo Pardo in the summer of 1941. Unfortunately, only the first season of the program was accomplished. The United States' entry into World War II in December, 1941, and the resulting dispersal of all concerned in the planning, put an end to the program. That one season, though, was a successful one. The senior writer, having participated in the planning from the beginning, undertook the leadership of the expedition in conjunction with his full-time duties at Gran Quivira National Monument. The junior writer, then of the University of Oregon, served as his assistant, supervising most of the actual excavations, and periodically helping out on the Monument. Eight students from Washington and Jefferson College were enrolled and made up the excavation crew. The National Park Service gave its complete cooperation to the Expedition throughout the field season, as did everyone in any way connected with the program.

Following the field work, a report of the results was prepared within a few months. To the senior writer fell the bulk of the analyses of the ceramic and architectural remains and interpretive generalizations, while the junior writer prepared an analysis of the non-ceramic artifacts. Due to lack of a publication outlet, this manuscript lay dormant until the present sponsor agreed to revive it some seventeen years later. Some revisions of the 1941 draft have been made by both authors, although, having been away from the area for some years, no attempt has been made to bring it thoroughly up-to-date.

Acknowledgments

Grateful acknowledgment is made to R. E. Allen, sponsor of the Expedition, and to Dr. E. M. Weyer, Dean, Washington and Jefferson College, both of whom visited the excavations, as well as to the College itself, for unlimited cooperation throughout. Without this support, the entire Expedition would have been impossible. Likewise, grateful acknowledgment is extended to the Southwestern National Monuments Headquarters, then at Coolidge, Arizona, and to the Region Three Office in Santa Fe, New Mexico, for the pleasant cooperation of both those units of the National Park Service in a multitude of ways. Individual members of the National Park Service staff in both offices, particularly Hugh M. Miller, until recently, Regional Director at Santa Fe, and Dr. Erik K. Reed, merit especial thanks for their personal assistance.

Specimen identifications of non-artifactual materials by Volney H. Jones, University Museums, University of Michigan, and by his associates, Dr. Emmett T. Hooper, Dr. W. H. Burt, Dr. Pierce Brodkorb, and Frances Hamerstron, are deeply appreciated, as are those by Dr. Howard Hill and Dr. Hildegard Howard of the Los Angeles County Museum.

Stanley Stubbs, Dr. H. P. Mera, Kenneth M. Chapman, W. S. Stallings, Jr., and others, then at the Laboratory of Anthropology in Santa Fe, provided many helpful services during the course of the work, and especial thanks is extended to them.

Dr. James N. Spuhler, then of Harvard University, undertook the analyses of human skeletal remains, and Stallings, undertook analyses of the dendrochronological materials. Entry of both these people into the Armed Services in World War II prevented completion of their reports. Dr. Georg Neumann, of Indiana University, later examined the human skeletal remains, but pressure of other work prevented completion of a report. Nevertheless, their efforts are appreciated.

The Southwest Monuments Association contributed funds towards shipment of study material and storage cases for specimens.

Particular gratitude is expressed to Dr. Fred Wendorf and the Publications Committee of the Museum of New Mexico for reviving the manuscript of this report and arranging for its publication.

Finally, and perhaps most important, the entire Expedition is deeply indebted to the eight students from Washington and Jefferson College who comprised the crew. Without salaries, and, in fact, paying their own expenses, Douglas McIlvane, James Naser, John Paull, George Redding, John Stevens, Donald Tangeman, John Townsend, and Robert Waltz worked diligently and ably throughout the season. This report is dedicated to those student diggers.

The Natural Settings

Pueblo Pardo lies three miles south of the ruin known as Gran Quivira National and State Monuments. Both sites are in the east-central part of the Gran Quivira quadrangle, a rectangular area including portions of Socorro, Torrance, and Valencia Counties in central New Mexico. The east and west boundaries of the quadrangle are the 106° 00' and the 106° 30' meridians of longitude, respectively. The north and south boundaries are the 34° 30' and the 34° 00' parallels of latitude (Bates, Wilpolt, MacAlpin, and Vorbe, 1947, p. 7).

Extending irregularly from the quadrangle's northeast corner to the center of its south boundary, is a high escarpment with steep north and west slopes. This escarpment divides the major part of the quadrangle, topographically, into two parts, a relatively low, rough area to the west and north, and a relatively high, gently rolling area -- Chupadero Mesa -- to the ease and south (Ibid., p. 9).

Chupadero Mesa is a wide tableland, with moderate to low relief, that occupies some 1700 square miles. Elevations in the northern portion range from 7,050 feet to 7,250 feet (m. s. l.). In the central and south-central portions of the quadrangle, Chupadero Mesa is marked by heavily wooded hills and ridges with intervening, steep-walled canyons. There are also numerous hills at the top of the escarpment that bounds the mesa on the west and northwest. Two of these are prominent east-trending ridges, the northern most of which is Turkey Ridge (Ibid., p. 10). Much of the surface of the mesa is under cultivation, principally in pinto beans and stock feeds. The topographic map of this gently rolling country discloses a distinct east-west orientation of low ridges and wide valleys. The Gran Quivira ruin stands at the west end of one of these low ridges. The Pueblo Pardo ruin stands at the west end of another (Figure 1).

Drainage over all that part of Chupadero Mesa lying in the Gran Quivira quadrangle is into sink holes, which range from a few square yards in area to several acres. Most of them are

shallow and dry, but in years of heavy rainfall, contain considerable water (Ibid., p. 10-11). Water is scarce on the mesa. Most present-day wells are very deep and produce brackish water. Potable water is collected in cisterns and in exceptionally dry years must be hauled from wells to the north, though some potable water is available, in meager quantities, from shallow wells on the mesa. Sherds of Indian pottery have been found in some of these wells, suggesting that perhaps similar wells were used by the Indians. In addition to this source of water, the Indians may have made use of ground-run-off water by collection in large, open cisterns (Toulouse, 1945).

The underlying bedrock of the area is the San Andres limestone, of Permian age. This is a gray, finely crystalline, thick-bedded to slabby stone (Bates, Wilpolt, MacAlpin, and Vorbe, 1947, pp. 23-24). Much of the soil is derived from this formation, and the Indians used the slabs, broken from outcrops, for the walls of their pueblos.

Pueblo Pardo and Gran Quivira both lie in a combination of Upper Sonoran and Transition life zones. Vegetation is principally grasses, yucca, buckhorn, prickly pear, and sagebrush, with occasional, scattered pinon and juniper. Animal life is abundant, and all of the animal remains found in the Pueblo Pardo excavations, except bison, are represented today.

Temperatures range from highs of around 100° F. to lows of around 5° F. Annual precipitation averages about 14 inches, but may fall well below this figure in dry years. Only the least demanding of crops can be raised. The growing season is approximately 120 days.

The Historical Setting

It appears certain, from the historical sources available, that neither the Coronado expedition of 1540 (Hammond and Rey, 1940) nor the Rodriguez-Chamuscado expedition of 1581 (Hammond and Rey, 1927) visited the Chupadero Mesa villages. The latter expedition did, however, reach the vicinity of Quarai and Abo, some 20 to 30 miles to the northwest, before returning to the Rio Grande valley because of deep snows (Ibid., p. 50).

It seems reasonable to infer that the first Spanish expedition to reach these villages was that of Antonio de Espejo, in 1582, and that Pueblo Pardo may have been one of the towns visited. A detailed comparison of the diary of Espejo himself with that of one of his companions, Diego Perez de Luxan, covering the same portions of that expedition, provides several highly suggestive lines of evidence (Bolton, 1916, pp. 178-181; Hammond and Rey, 1929, pp. 77-78). Specific reference to Pueblo Pardo, however, is not to be found in any of the Spanish documents of the 16th or 17th centuries. Not even any of the documents of Juan de Onate of the period of his Spanish settlement of New Mexico at the beginning of the 17th century can provide a specific reference to a village near that of Humanas (Hammond and Rey, 1953). The Pueblo de Las Humanas has been identified with the ruin of Gran Quivira, just three miles north of Pueblo Pardo (Kubler, 1939, pp. 418-421; Scholes and Mera, 1940; Bloom, 1940, pp. 98-99).

The ceramic remains recovered in the 1941 excavations, on the other hand, leave little doubt that the site was occupied into historic times, at least as late as the beginning of the Onate settlements, and tend to support the inferences derived from the Espejo and Luxan journals. Ceramic types such as Red "Brick" ware, Salinas Redware (both post-1630 types), Kotyiti Glaze-Polychrome and Tabira Black-on-White, all of which have been found at the former Spanish Mission of San Gregorio de Abo, were also found at Pueblo Pardo. This would suggest that at least some people were living here during the first third of the 17th century. Such ceramic types as Sankawi Polychrome, Tewa Polychrome, and Tabira Polychrome, representative of the late levels at San Gregorio de Abo, were not found at Pueblo Pardo. This suggests that, if the site was occupied during the 17th century, that occupation was not for many years. Furthermore, no European artifacts or other direct evidence of Spanish contact were found in the limited area of excavation in 1941. This may be due to sampling error.

The archeological evidence combined with the documentary evidence, therefore, would seem to support the suggestion that Pueblo Pardo was in the final stages of abandonment during the first third of the 17th century. The few families still living there during the Onate colonization probably were considered as belonging to the "village of the Humanas" (Gran Quivira). With the first missionary endeavors, these few remaining families may have consolidated with those of Humanas. Pueblo Pardo, then, would have been finally abandoned in the 1630's, without ever having been of sufficient size or political importance, during the 17th century, to have received mention in the Spanish records.

Such a slow decline and gradual abandonment appears to have terminated a moderately long occupation of Pueblo Pardo. The beginning date is uncertain, but the pottery types recovered suggest a period of perhaps as much as four centuries of occupation.

Figure 1. Pueblo Pardo from the north. The ruins occupy the crest of the ridge in the center

The Archeological Setting

Surface Features

The ruin of Pueblo Pardo occupies a portion of the west end of a low, rounded ridge, some 200 feet above the wide, shallow valleys to the north and south (Figure 1). The site consists of an irregularly patterned cluster of structures with the room units nearly adjoining, and only narrow lanes between. A few units are isolated. It is estimated that somewhat over a hundred rooms are present. Several irregular plazas are discernible between the units, and in three of these are circular depressions, presumably representing kivas (Figure 2).

The most noticeable surface features of the site are the random scatterings of small to large, limestone slabs and the surface irregularities that mark the remains of masonry walls and rooms. The limestone slabs that once formed nearly half of the pueblo superstructures lie scattered over an area of some four acres or more. The wall fragments that remain standing are buried by windblown debris and clusters of rooms appear as low, mounded eminences on the surface, often with depressed areas in their surfaces, representing room interiors. The general ground slope is to the north at the rate of about one foot in twenty-five. The crest of the ridge forms the south edge of the site.

On the southwest side of the site is a deep "sink" or quarry, which, at the time of occupation, could have stored a considerable quantity of water. Today, due principally to the destruction of any stone plating that may have once lined this "sink", no water remains for long in this potential cistern. In Bandelier's description of Pueblo Pardo, he refers to a ditch running toward the south from this feature (Bandelier, 1892, p. 288). A detailed examination of the area, though, fails to reveal any trace of this ditch at the present time. This is not surprising, since a similar ditch at Gran Quivira, easily traced at the time of Major General James H. Carleton's visit in 1853 (Carleton, 1855, p. 296), and at the time of Bandelier's later visit, is difficult to trace today. This leveling and obliteration of surface features, even during the last century, has been due, in part, to livestock grazing and in part to weathering. It seems apparent that the Pueblo Pardo water supply was meager at best, and dependence for a sufficient supply may well have been placed upon shallow wells and collection of surface run-off in artificial or natural reservoirs. Such is suggested by the elaborate, artificial reservoir and ditch system at Gran Quivira (Toulouse, 1945).

Excavations

During the field season of June 21 to August 16, 1941, excavations were accomplished in two of the room-units and in one kiva in the northwest portion of the site. Fourteen rooms were excavated, four in the north unit and ten in the west unit, and walls of seven other rooms were outlined, three in the north unit, and four in the west unit. The excavated kiva was situated in

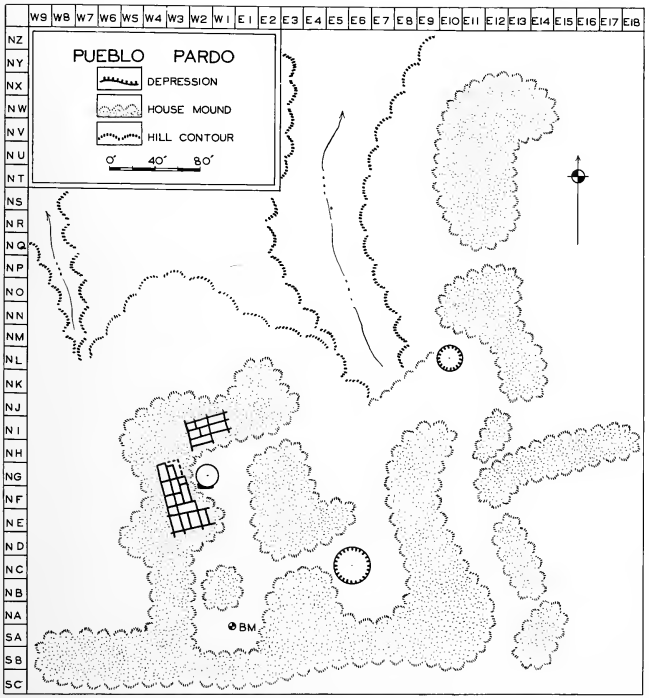


Figure 2. Plan of Pueblo Pardo

a plaza between these excavated room-units, south of the north unit and east of the west unit (Figures 2 and 3). A test trench was also excavated in one of the east plazas, and shallow trenches were excavated around the outer walls of three of the unexcavated rooms. Additional seasons of work had been planned for other portions of the site, and the 1941 work was, therefore, concentrated in only the northwest sector. For this reason, the present report covers only a selected portion of the site.

A map of the entire site was prepared (Figure 2), and, as the work progressed, a detailed map of the excavations was made (Figure 3). Individual profiles and plan drawings of most of the rooms (Figures 5-16) and of the kiva (Figure 19) were made, and composite profiles of each room unit and the kiva were drawn (Figure 4).

A datum point, or bench mark (Figure 2, BM), was established and set in concrete on a point to the south of the work area, from which all portions of the site could be seen. Datum elevation was arbitrarily fixed at 1000.0 feet, and all elevations and measurements were taken in relation to this point. The area to be excavated was laid out in blocks twenty feet square, based upon an east-west line through the datum point. Each block west of the datum point was designated

as W1, W2, W3, etc. Each block east of the datum point was designated as E1, E2, E3, etc. Blocks to the north were designated as NA, NB, NC, etc., and blocks to the south were designated as SA, SB, SC, etc. (Figures 2 and 3). Each room was assigned a number, in sequence, as excavated. The excavated kiva was designated as Kiva A.

Three stratigraphic levels, represented by floors, were distinguishable in the excavated rooms. Two of these, by reason of their ceramic content, seem especially significant (Figures 3 and 4). The upper, and best-defined level has been assigned to the Pueblo Pardo Focus. This focus is defined on the basis of this, the type site. The lower level has been assigned to the Pueblo Colorado Focus, identified on the basis of ceramic similarities to the type site of that focus, Gran Quivira Survey Site 12 (Laboratory of Anthropology Site 2091). These and other foci will be more fully discussed in the final section of this report.

Architecture

Rooms

All of the rooms excavated or outlined were sub-rectangular, with masonry walls constructed of uncut, limestone slabs set in adobe mortar. The slabs were of local origin, having been quarried from outcrops of the bedrock along the low hill on which the village was built. The masonry was irregularly coursed, and both inner and outer wall surfaces were smooth and even, but not faced. The walls were uniformly 1.0 foot thick, except for the north wall of Room 4, which was 1.2 feet thick, and the fragments of intra-mural walls which were less than 1.0 foot thick. All room walls, except the north and east walls of Room 5, were plastered on the interior, concealing wall junctions. These wall junctions are indicated in Figure 2. Floors were constructed of uniformly hard-packed adobe and were easily recognized in the excavations. Room fill consisted of a few inches of windblown sand over the floor and fallen wall debris above this to the surface. Roofing beams were notably absent, and only in Room 7 were any found. Room 5A was the only one that showed any evidence of having been burned. Structural alterations, such as wall changes, door blocking and reflooring, were noted in nearly all rooms excavated. Interior architectural features were not numerous, but occurred in nearly every room and included intra-mural walls, firepits, a bench, a clay ramp, ash pits, a bin, cache pits, and sub-floor burials.

Room 1 (Figure 5)

This exterior room is the southwesternmost of the excavated rooms in the west unit. It had been disturbed by earlier, random digging, and an adolescent burial had been removed from a few inches beneath the floor level of the northwest corner. The room measured 14.5 feet (N-S) by 5.6 feet (E-W). The single floor (6.9 feet below datum) was nearly level and 2.9-4.1 feet below ground surface. Virgin soil was found at a depth of 3.0 feet below floor level, and the subfloor fill contained fragments of charcoal and an occasional potsherd. All four walls were based on the bottom of the floor level. Other than the burial, no interior features were found.

An exterior door opening, 1.7 feet wide and 0.1 foot above floor level, was situated in the west wall, 4.2 feet from the south wall. An interior door opening, 1.75 feet wide and 0.1 foot above floor level, was situated in the east wall, 6.7 feet from the south wall, and opening into Room 8.

Room 2

This interior room, near the center of the excavated portion of the west unit, had also been disturbed by previous, random digging, and no profiles or ground plans were made. It measured 10.7 feet (N-S) by 5.8 feet (E-W). The single floor (10.0 feet below datum) was 3.3 to 4.3 feet below ground surface. Virgin soil was 2.5 feet below floor level, and the sub-floor fill contained bits of charcoal and occasional potsherds. No interior features were found.

A blocked door in the east wall, adjacent to Room 7, was 1.7 feet wide, 0.25 foot above floor level, and 6.25 feet from the south wall. Another blocked door in the west wall, adjacent to an unexcavated room, was 1.25 feet wide, 0.33 foot above floor level, and 5.5 feet from the south wall.

---

1. Rooms were sub-rectangular and dimensions are given as averages of the two opposing walls.
2. Most floors were reasonably level. Depth ranges for a single room result from ground slope and unequal wall deterioration.
3. Door heights could not be estimated, as the upper portions of all doors were missing.

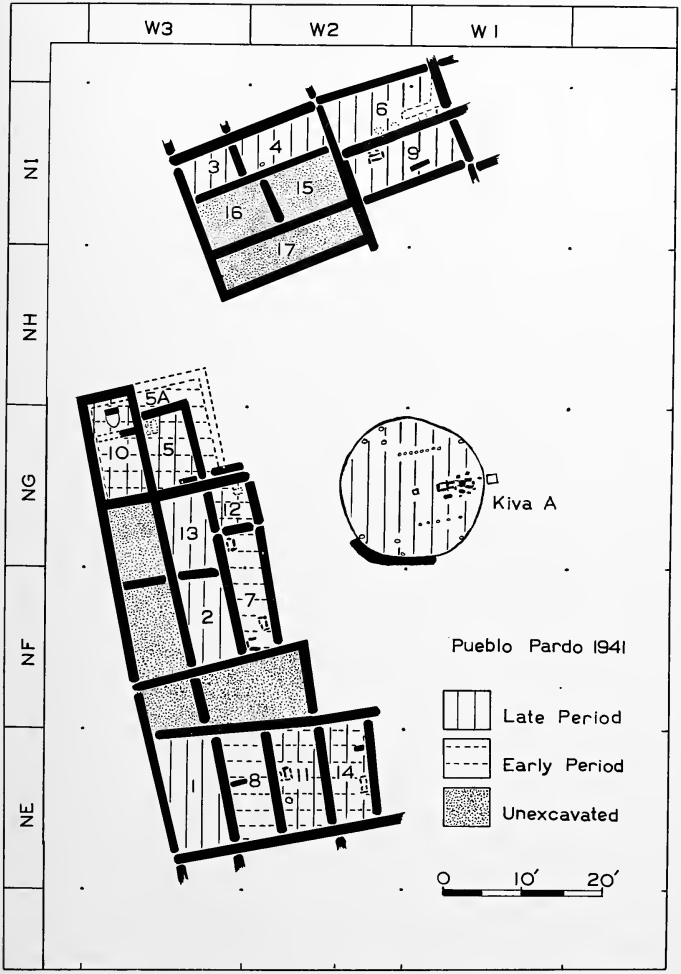


Figure 3. Excavated rooms and kiva, Pueblo Pardo

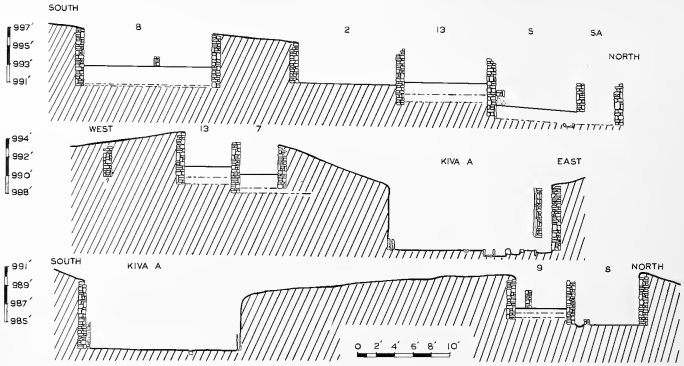


Figure 4. Sections through excavated rooms, Pueblo Pardo

Room 3

The northwesternmost of the excavated rooms of the north unit, too, had been disturbed, and no profile or ground plan was made. It measured 5.0 feet (N-S) by 7.5 feet (E-W). The single floor (17.0 feet below datum) was 4.75 to 5.2 feet below ground surface. Bedrock was 1.0 foot below the floor, and all four walls were based on bedrock. No interior features were found. A door opening, 1.6 feet wide and 1.5 feet above floor level, was situated in the north wall, 2.7 feet from the west wall.

Room 4 (Figure 6)

Another interior room disturbed by previous, random digging was adjacent to and east of Room 3. It measured 5.1 feet (N-S) by 11.5 feet (E-W). The single floor level (16.5 feet below datum) was 3.5 to 4.6 feet below ground surface. Bedrock was 0.5 foot below floor level, and all four walls were set on bedrock. A blocked door in the north wall, 1.2 feet wide, was 5.0 feet from the west wall and 1.3 feet above floor level. Another blocked door, opposite it, in the south wall, was 1.25 feet wide, 1.2 feet above the floor, and 5.5 feet from the west wall.

Three interior features and six burials were found in this room. One feature was a rectangular pit, with rounded corners, in the northwest corner of the room. A simple, concave-bottomed pit, filled with ashes, it measured 2.8 x 1.2 feet and was 0.66 foot deep at center. The second feature was an oval, rimmed pit in the northeast corner. It was lined with clay, and the burned clay was built up 0.25 foot above the floor level around the pit edges. Outside this rim, the pit was surrounded by a small trench, 0.25 foot wide and 0.25 foot deep. The ash and charcoal-filled pit was 3.0 feet (E-W) by 1.5 feet (N-S) with a concave bottom 0.6 foot deep at center. Both these features may have been cremation pits, though no recognizable human bone fragments were found within them. The third feature was a small, hemispherical cache pit, 1.0 foot in diameter and 0.75 foot deep, dug through the floor into bedrock along the south wall, 3.2 feet from the west wall.

Two burials (No. 1 above No. 2) in cists near the center of the room, were dug through the floor and the subfloor fill into bedrock. Burials 10, 11, 12, along the west half of the south wall, were in stone-lined, subfloor cists dug into bedrock. The sixth burial (No. 13) was also in a subfloor cist and lay beneath the clay-lined pit in the northeast corner of the room.

Room 5 (Figure 7)

In the northeast corner of the west unit, adjacent to Rooms 10 and 13, Room 5 is a late period contraction of Room 5A. It measured 8.8 feet (N-S) by 5.5 feet (E-W), and the single floor level (11.2 feet below datum) was 2.2 to 4.4 feet below ground level. Bedrock was 2.6 feet below the floor, and the west and south walls were set on bedrock, while the east and north walls were set on floor fill of Room 5A at Room 5 floor level. The latter two walls were not plastered,

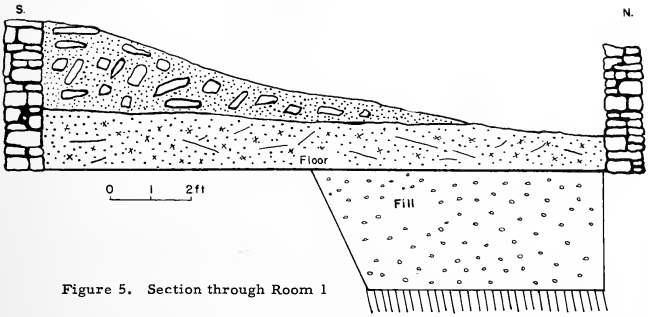


Figure 5. Section through Room 1

but the south and west walls, which also are the major portions of the south and west walls of Room 5A, were plastered. No doors were found.

The only interior, architectural feature of Room 5 was a small shelf, or bench, located in the southeast corner. It consisted of a fine soil, set on a clay base, and faced with upright stone slabs with horizontal stone slabs over the top surface. It was 3.0 feet long (E-W), 0.9 foot wide, and 1.5 feet above floor level.

Room 5A (Figure 7)

The older structure of this room-complex (Rooms 5 and 5A) measured 13.0 feet (N-S) by 8.3 feet (E-W) and included the area of both rooms. A slightly compacted, irregular surface, at the level of the floor of Room 5, represents the surface of this room at the time of the occupation of Room 5 and suggests that Room 5A was more-or-less abandoned at the time of the building of the later room within the Room 5A area. A single floor level can be assigned to the earlier room, 1.5 feet below the floor level. No doors were found in any of the four plastered walls, but vertical, stone-slab veneer was found covering the portion of the south wall, outside Room 5 (Figure 18).

Interior features included a firepit, a cremation pit, a small cache pit, an ash lens and seven burials. The firepit was 6.4 feet from the south wall and 0.5 foot from the west wall. It was a well-made, rectangular, clay-lined pit, with rounded corners and perpendicular walls. It measured 1.6 feet by 1.0 foot, and 0.5 foot deep. Two large, upright "fire-dogs" were found in place, 0.5 foot apart between the firepit and the west wall. The walls and bottom of the pit were lined with thin, stone slabs beneath the clay covering.

The cremation pit along the south wall, 1.1 feet from the west wall, was a roughly oval clay-lined pit with concave bottom. It contained ash, charcoal, fragments of charred human bone, and numerous potsherds. The small, hemispherical cache pit in the southeast corner of the room was 0.33 foot in diameter and 0.5 foot deep. The ash lens, near the center of the room, was not distinct enough for accurate measurement, but was dug into the floor and was about 0.33 foot deep. Near the south wall, some burned, fibrous material was found, and general floor debris over most of Room 5A showed evidence of the room having been burned.

Other than Number 6, in the cremation pit, all of the burials (Burials 4, 14, 16, 17, 20, and 21) were in cists dug into, and beneath the floor. Burial 4, however, was partly on the floor level, alongside the firepit, and, while it predates the Room 5 structure, appears to postdate the burning of Room 5A, as the above-floor remains were not burned. Burial 14, too, had its origin after some of the floor debris had accumulated over Room 5A.

Room 6 (Figure 8)

Another disturbed room, this northeasternmost of the excavated rooms in the north unit measured 6.5 feet (N-S) by 14.1 feet (E-W). The single floor level (14.7 feet below datum) lay directly

upon bedrock, 4.9 feet below surface. A door opening in the north wall, 2.8 feet from the west wall, was 1.5 feet wide and 1.6 feet above the floor. A door opening in the south wall, 6.0 feet from the west wall, was 2.2 feet wide and 1.8 feet above the floor. Remains of an intra-mural wall were found in the southeast corner, extending beneath the east wall. This wall remnant was only 0.5 foot high. Between the south wing of this intra-mural wall and the south wall of the room, a stone-lined cache pit, 1.0 foot in diameter, was dug into bedrock. Two similar cache pits were found along the south wall further to the west. In the southwest corner of the room, a shallow depression containing ash and charcoal may have been a cremation pit. In the northwest corner of the room was a small, rectangular, stone-lined, burial cist. All four walls of this room, as well as the intra-mural wall, were set on bedrock.

Room 7 (Figure 9)

This long, narrow room on the east side of the west unit was 14.2 feet (N-S) by 6.5 feet (E-W). Three floor levels were present. The top floor (9.2 feet below datum) was 3.5 to 4.0 feet below surface. The middle floor was 1.8 feet below the top floor and the bottom floor was 0.7 foot below the middle floor. A door in the west wall, 4.9 feet from the south wall, was 1.6 feet wide and 0.25 foot above the top floor level. A door in the east wall, 1.5 feet from the north wall, at top floor level and 2.1 feet wide, faced the plaza and Kiva A. The east and north walls were set on fill at the bottom of the middle floor level. The west and south walls were set on bedrock.

Architectural features of the top floor included decayed (not burned) roofing timbers in the southwest quadrant of the room, a bin, and, a firepit. The bin was set upon the top floor and consisted of upright stone slabs on three sides with the fourth side open, and a hard-packed clay floor. It measured 1.5 feet by 1.6 feet and was 1.7 feet deep. The rectangular firepit, in the northwest corner of the room, was 1.5 feet by 1.0 foot and 0.33 foot deep. It was lined and floored with broken manos and metates. No "fire-dogs" were found with it.

Associated with the middle floor level was another rectangular firepit, lined and floored with stone slabs and measuring 1.7 feet by 0.8 foot and 0.5 foot deep. It was 6.8 feet from the south wall, and a single "fire-dog" remained in place between the pit and the east wall. A second "fire-dog" had fallen into the pit.

Room 8 (Figure 10)

This room in the west unit is just east of Room 1 and measured 14.3 feet (N-S) by 6.2 feet (E-W). Three floor levels were present. The top floor (7.3 feet below datum) was 3.3 to 4.0

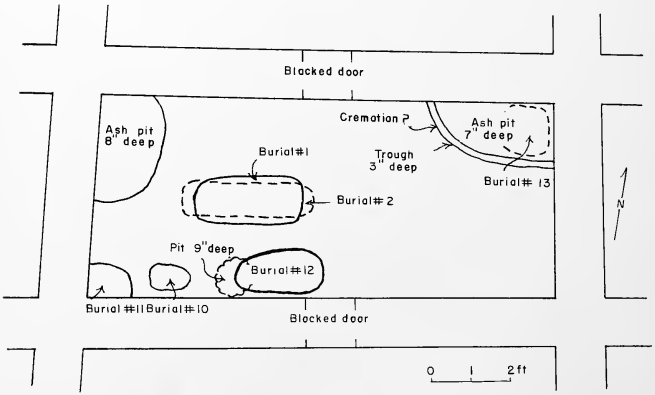


Figure 6. Plan of Room 4

feet below surface. The middle floor was 2.0 feet below the top floor and the bottom floor was 0.2 foot below the middle floor. A door in the west wall was 8.0 feet from the south wall, 1.6 feet wide, and 0.6 foot above the top floor. An intra-mural wall, 0.75 foot thick and 1.2 feet high, extended into the room from the center of the west wall, and was set on the top floor. The four outer walls of this room were all set on the bottom floor level. Burials 9, 15, and 23 were in cists dug from, but sealed over by, the top floor. Burials 18 and 19 were in cists between the top and middle floors.

Room 9 (Figure 11)

The fourth room excavated in the north unit, adjacent to the south side of Room 6, was 14.0 feet (E-W) by 5.4 feet (N-S) and had three floor levels. The top floor (13.2 feet below datum) was 3.3 feet below surface. The middle floor was 0.4 foot below the top floor, and the bottom floor was 0.6 foot below the middle floor. A door in the north wall, 5.5 feet from the west wall, was 1.5 feet wide and 0.6 foot above top floor level. All four walls were set on bottom floor level.

Architectural features associated with the top floor included an intra-mural wall, a firepit, a cist burial, and two pit burials. The wall was set on the top floor, was 0.7 foot thick, 2.4 feet long, 2.5 feet high, and appeared to be complete, rather than a fragment. It may have served as a screen or partition of some sort. The rectangular firepit was stone-lined and stone-floored along the north wall, 4.5 feet from the west wall. It was 1.75 feet long by 0.33 foot wide and 0.5 foot deep, with two "fire-dogs" between it and the north wall, 0.6 foot apart. A cist burial (Burial 5), in the northwest corner of the room, and a cremation pit (Burial 8), in the northeast corner, were both dug from the top floor level.

An oval, clay-lined pit along the center of the south wall was dug below the bottom floor level, and a poorly defined fire lens was found just beneath the bottom floor, near the center of the room.

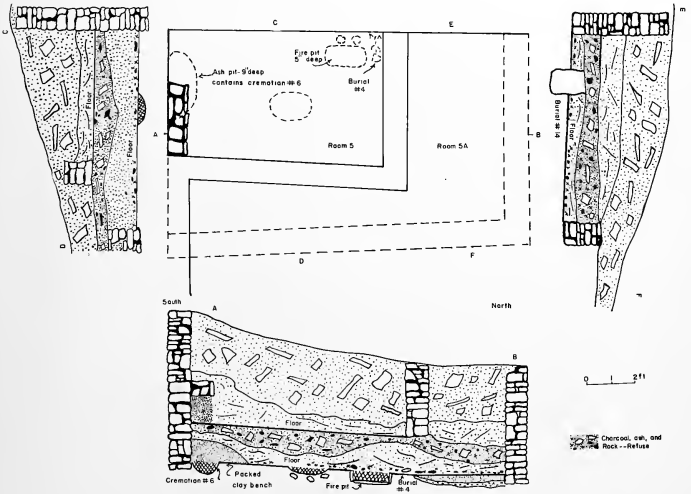


Figure 7. Plan and section of Rooms 5 and 5A

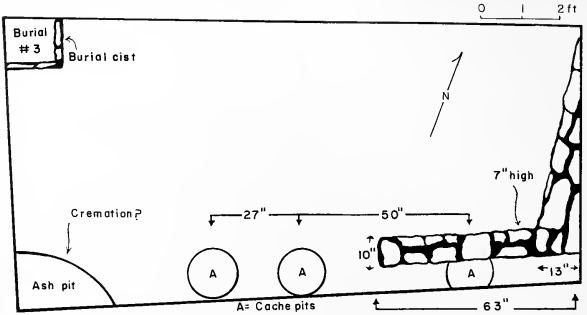


Figure 8. Plan of Room 6

Room 10 (Figure 12)

The northwesternmost room of the west unit was 14.5 feet (N-S) by 5.9 feet (E-W) and had three floor levels. The top floor (10.2 feet below datum) was 2.2 to 3.7 feet below surface. The middle floor was 0.9 foot below the top floor, and the bottom floor was 1.8 feet below the middle floor. No doors were found. All exterior walls were set on the bottom floor level and were plastered. The upper portions of the north and west walls were offset, outward, from the lower portions of those walls by 0.5 foot, thus leaving a sort of bench or shelf around those two walls at top floor level and expanding the size of the room in the final stage of occupation.

No interior features were associated with the top floor. On the second floor was a clay ramp, 3.0 feet wide and 4.0 feet long. It extended from the center of the room to an intra-mural wall section in the north part of the room, to which it was connected. This ramp reached a maximum thickness of 0.6 foot at the base of the wall section, and on this end was capped with stone slabs. The wall section, in the center of the north end of the room, appeared to be complete, except for height, rather than a fragment. It was 0.9 foot thick, 3.0 feet long, and extended from the middle floor level to the surface. Centered in the upper portion of this wall was a window, 1.4 feet wide and of unknown height, with its wooden sill in place 2.3 feet above the middle floor. The entire middle floor of this room was covered with a layer of decomposed animal dung, except in the area of the clay ramp and wall.

On the bottom floor was a second intra-mural wall remnant extending from the west wall to the east wall at the south end of the middle floor ramp. This wall, 1.0 foot thick, extended to the top floor in its eastern third, but only up to the second floor in its western two-thirds. A clay-lined, oval pit was found beneath the bottom floor directly under the ramp. Burials 33, 34, and 36 were found in cists (No. 33 was stone-lined) beneath the bottom floor.

Room 11 (Figure 13)

Another room in the west unit was 13.5 feet (N-S) by 5.6 feet (E-W) and had two floor levels. The top floor (7.2 feet below datum) was 2.7 to 4.0 feet below surface. The bottom floor was 0.8 foot below the top floor. No doors were found in this interior room. All four walls were set upon the bottom floor level.

At the level of the top floor, a slab-lined, slab-bottomed firepit near the center of the west wall was 1.5 feet long by 0.9 foot wide and 0.5 foot deep. Between it and the west wall were two "fire-dogs", in place, 0.6 foot apart, and a third, moveable "fire-dog" was found in front of the firepit, along with half of a large cooking vessel. Along the west wall, 2.2 feet from the south wall, was a straight-sided, ash-filled pit, 1.8 feet in diameter and 1.7 feet deep. An upright, slab metate was found near the east wall, 4.4 feet from the north wall.

Between the two floors were five burials, sealed over by the top floor. Burial 28, a cremation, in a stone-lined pit, was in the northwest corner. Burial 27 was in a cist near the northeast corner, and Burials 26, 30, and 31 were in overlapping cists in the southeast corner of the room.

Room 12 (Figure 14)

The smallest of the excavated rooms was 4.7 feet (N-S) by 4.2 feet (E-W) and had three floors. The bottom floor was continuous with the bottom floor of Room 7. At that level, Room 12 was thus a part of Room 7. The top floor (9.1 feet below datum) was 2.6 to 3.3 feet below surface. The middle floor was 1.0 foot below top floor, and the bottom floor was 0.3 foot below the middle floor. The south and east walls were set upon the middle floor level, and the north and west walls upon sterile soil below the bottom floor. A door in the southeast corner of the room was 1.1 feet wide and 0.75 foot above the top floor.

This seems to have been a storeroom, as burned corn and sherds of utility pottery were abundant here. There were three sterile pits in the upper floor and no features in the middle floor. In the bottom floor was a rectangular, clay-lined firepit with stone slabs beneath the clay lining. No "fire-dogs" were found. This firepit, in the north-center of the room, was 1.6 feet by 1.0 foot, and 0.5 foot deep. Burial 24, a cremation, was in a pit near the west wall. Burial 25 was in a cist in the northwest corner, and Burial 29 was in a cist against the east wall. All three burials, were between the top and middle floors.

Room 13 (Figure 15)

This interior room, adjacent to Rooms 2, 5, 7, and 12, was 9.6 feet (N-S) by 5.4 feet (E-W) and had three floors. The top floor (9.0 feet below datum) was 8.9 feet below surface. The middle floor was 1.5 feet below the top floor, and the bottom floor was 0.8 foot below the middle floor. The north wall was set on bedrock, 1.2 feet below the bottom floor, and the other three walls were set upon the bottom floor. A blocked door in the east wall was 3.9 feet from the north wall, 1.5 feet wide, and 1.0 foot above the top floor. Burial 32 was found in a cist below the bottom floor in the southwest corner of the room. No features occurred in any of the floors.

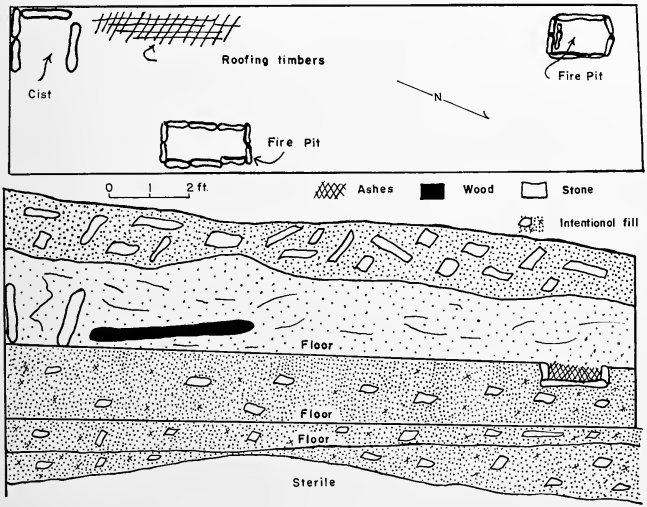


Figure 9. Plan and section of Room 7

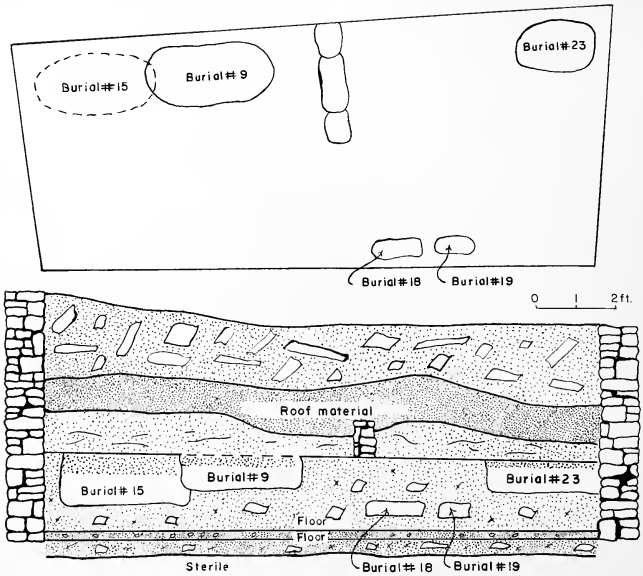


Figure 10. Plan and section of Room 8

Room 14 (Figure 16)

The final room excavated was 13.7 feet (N-S) by 4.8 feet (E-W) and had two floor levels. The top floor (7.6 feet below datum) was 2.4 to 4.1 feet below surface. The bottom floor was 0.5 foot below the top floor. All walls were set on the bottom floor level. A blocked door in the west wall, 5.3 feet from the north wall, was 1.6 feet wide and 2.0 feet above the top floor. A blocked door in the east wall, 2.5 feet from the north wall, was 2.0 feet wide and 0.5 foot above the top floor. An oval, slab-lined, slab-bottomed firepit in the top floor against the east wall was 3.0 feet from the south wall. It measured 1.6 feet by 1.1 feet and was 0.5 foot deep. A fragment of intra-mural wall extended from the east wall, 5.0 feet from the north wall, 2.25 feet into the room. It was 0.9 foot thick and 3.0 feet high, set upon the top floor. A metate lay by the south side of this wall. An ash pit was found in the northwest corner of the room. The only burial was a cremation, Burial 35, in a cist below the bottom floor, near the center of the room.

Room Features

Doors

Doors were generally situated near the centers of the longest walls of the rooms and usually in both long walls. One corner door was in the only room (Room 12) that was nearly square. The only door slab found was in an unexcavated room (Room 17) from which the wall outlines were cleared. Heights of doors were all indeterminate, as no complete ones were found. Widths ranged between 1.1 feet and 2.0 feet, averaging 1.6 feet. All were above the level of the top floors and ranged from 0.1 foot to 2.0 feet above that level. Doors were found in all rooms except Rooms 5, 5A, 10, and 11.

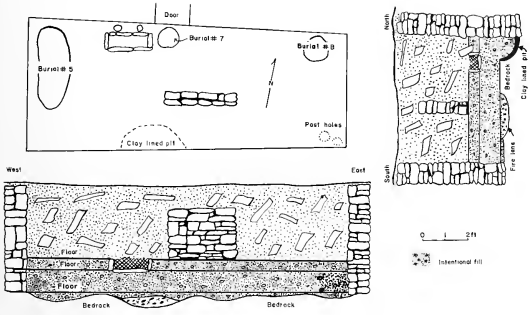


Figure 11. Plan and section of Room 9

Firepits

These were well-prepared, slab-lined, rectangular to oval pits, lined with stone slabs, and of rather uniform size, averaging 0.75 foot wide by 1.6 feet long and -.5 foot deep. They occurred in Rooms 5A, 9, and 11, accompanied by two stationary "fire-dogs" and one moveable "fire-dog" (Figure 17, lower), and in Rooms 7, 12, and 14 without "fire-dogs" (Figure 17,upper). They were found in association with all three floor levels. However, firepits with "fire-dogs" appears to be the later of the two types.

Bench or Shelf (?)

A single bench-like structure occurred in Room 5, made of fine soil fill, set on a clay base, with limestone slabs over the sides and top. It was 3.0 feet long, 0.9 feet wide, and 1.5 feet high (Figure 18, upper).

Bin

A slab-lined bin, 1.6 by 1.5 by 1.7 feet high, made of limestone slabs, was found in the southwest corner of Room 7 and was directly upon the top floor level.

Cache Pits

In the floor of Room 12, and in the subfloor bedrock of Rooms 4 and 6, were five hemispherical cache pits. They averaged 1.1 feet in diameter and 0.75 foot in depth. A single, slab-lined storage, or cache pit was excavated in the east plaza. It was lined with upright limestone slabs and measured 2.5 by 2.5 by 1.6 feet deep (Figure 18, lower).

Intra-Mural Walls

Wall fragments were found inside five rooms. Those in Rooms 6, 8, 10, and 14 appeared to be remnants of partitions, while a second one in Room 10 and the one in Room 9 seemed to be complete in their lateral dimensions and to have served some special function. The second one in Room 10 was equipped with a window.

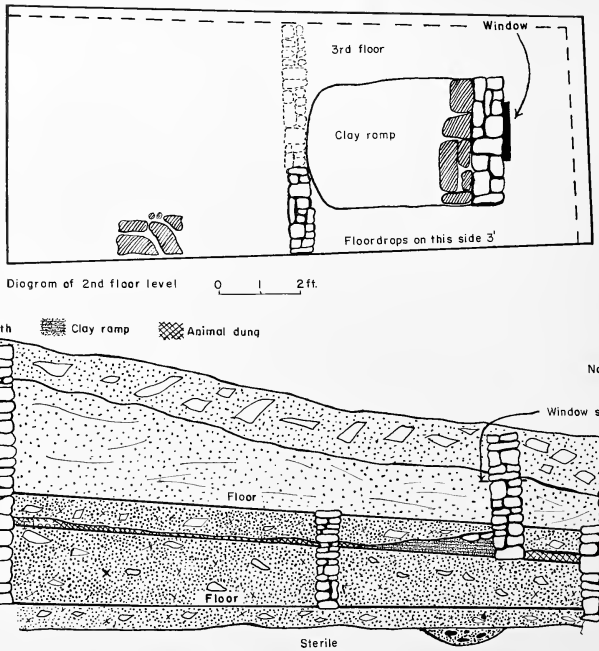


Figure 12. Plan and section of Room 10

Kiva A (Figures 19 and 20)

One of three kivas in the site was excavated, leaving a larger one and a smaller one for future work. Kiva A was excavated by cross-trenching to find the walls and then peeling the entire structure down to floor level which averaged 6.0 feet below surface. This kiva was roughly circular, with a slightly flattened south side and a maximum diameter of 16.0 feet. Except for the south side, the walls were of disintegrated limestone and earth, as the structure was dug into bedrock. On the south side, an adobe-mortared, limestone-slab wall had been constructed to direct the natural drainage around the structure and to help serve as a retaining wall. The entire wall circumference was plastered with a 0.5-foot thick coating of adobe and strengthened by a series of small poles set one-half to one foot apart (Figure 20, A). The floor was a layer of compacted clay, 0.25 foot thick, with a very smooth surface.

A rectangular, stone-lined, ventilator (Figure 20, V) was on the east side of the kiva. It had a small, one-foot-square, straight shaft entering the room at floor level. There were nine main roof-support posts, seven of which were along the walls and two away from the walls (Figure 20, P). These posts were 0.5 to 0.7 foot in diameter and set in stone-lined, sub-floor pits. All of the roofing timbers had burned and collapsed when the kiva burned, and their charred remnants were scattered through the fill, so that the roof structure could not be determined. It seems prob-

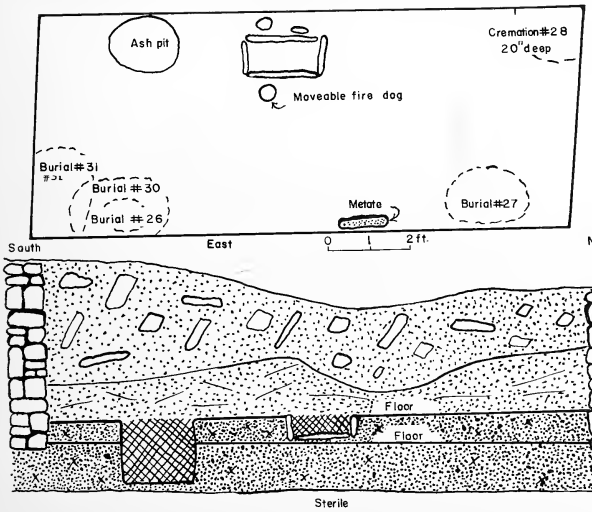


Figure 13. Plan and section of Room 11

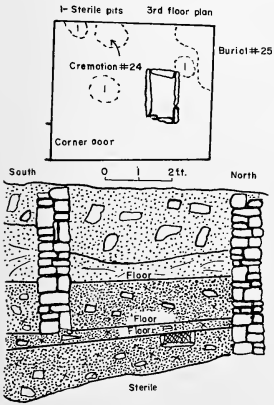


Figure 14. Plan and section of Room 12

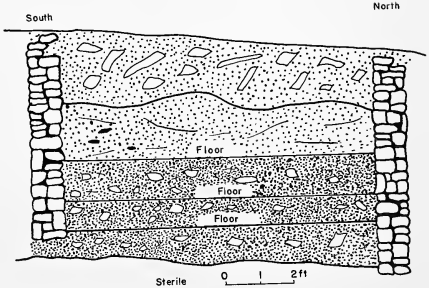


Figure 15. Section through Room 13

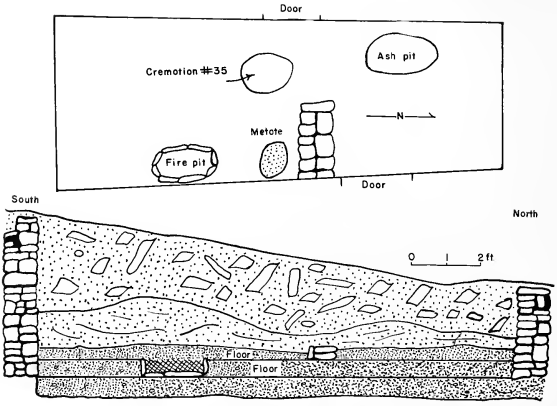


Figure 16. Plan and section of Room 14

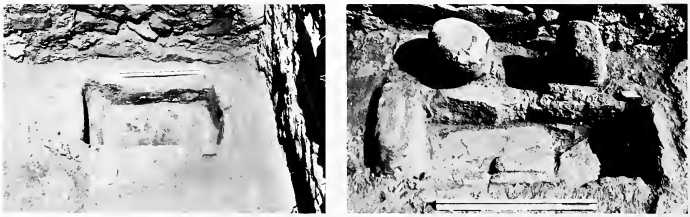


Figure 17. Left, stone-lined firepot; Pueblo Colorado Focus. Right, stone-lined firepit with firedogs, removable firedog missing; Pueblo Pardo Focus

Figure 18. Left, stone-faced bench, Room 5. Right, slab-lined storage pit in the plaza

Figure 19. Kiva A

able, though, on the evidence from the support posts, that five main beams had been employed for the basic structure. One beam would have extended over support posts 7-8-9-4; a second beam over posts 1-8-6; a third over posts 3-9-5; a fourth over posts 1-3; and a fifth over posts 6-5. This leaves post number 2 without a function, but it may have served some entirely different purpose.

Floor features included a small, rectangular stone with a rectangular depression cut in the top, located near the center of the kiva and set into the floor, which probably served as a sipapu (Figure 20, S). The firepit-ash pit complex was a series of three slab-lined, rectangular pits between the ventilator and the sipapu. The innermost pit had a slab bottom and served as the firepit (Figure 20, F). The other two, nearer the ventilator, were ash pits. An upright slab, within the wall-line, at the mouth of the ventilator, served as a low deflector. All three pits were set within a large, adobe-filled pit dug 0.7 foot below floor level. Several flat sandstone slabs were imbedded into the floor on the north and south sides of these pits. This firepit-ash pit complex and other features of this kiva compare favorably with the kiva found at San Gregorio de Abo (Toulouse, 1949, Figure 5). Two parallel lines of small holes in the floor on opposite sides of the firepit seem to have been loom holes. The north line included eight holes, and the south line included five holes. All were 0.1 foot in diameter and 0.6 foot deep. Beneath the floor each loom hole was 0.25 foot in diameter, indicating that the flooring adobe had been squeezed tightly around a small pole, set in a larger hole. Some fifteen other, similar, small post holes were found beneath the floor. A row of nine of these was 0.5 foot north of and parallel to the south row of loom holes, a row of five extended to the west from the sipapu, and others were scattered at random between the firepit and the ventilator.

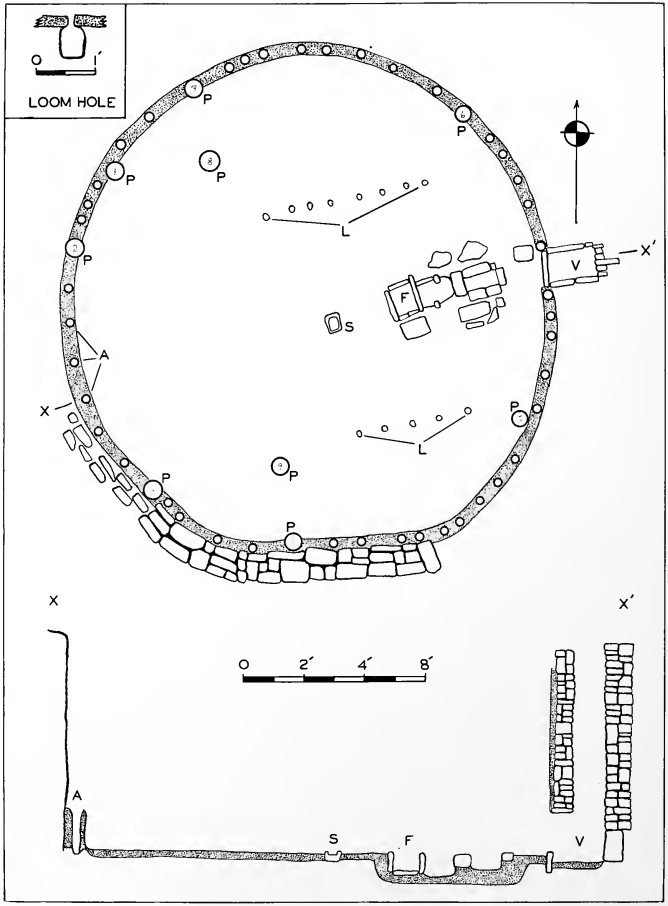


Figure 20. Plan and section of Kiva A

Pottery

A total of 3705 potsherds, including seventeen large, restorable vessel sections, was recovered from the fourteen rooms and one kiva excavated at Pueblo Pardo in 1941. For purposes of study, these may be grouped into six broad categories:

1. Chupadero White Ware - 15.1%
2. Rio Grande Glaze Paint Ware - 7.3%
3. Intrusive Decorated Wares - 1.6%
4. Plain Brown Wares - 4.6%
5. Grey Utility Wares - 37.3%
6. Miscellaneous Glaze Paint Wares -34.1%

These ceramic groups at a village in central New Mexico are not exceptional, rather what one would expect from a review of the literature and the archeological survey collections of this area. In the ceramic tabulation (Figure 25) the provenience of sherds of each of the types of the six groups is listed by floor levels within the rooms. In this tabulation it is obvious that certain types are consistently present in all levels. It is also apparent that some types tend to dominate one level and be absent or nearly so in others. This stratigraphic separation is by no means as clear-cut as one would wish, but it does tend to support the floor level stratigraphy and suggest two occupations for this end of the site.

The six pottery groups are presented here by type and comments are made on the types of each group. In cases where additions can be made to the previously published descriptions, or where new types are involved, as much descriptive data as possible will be given.

Chupadero White Ware

(1) Chupadero Black-on-White (Mera, 1931)	- 80 sherds
(2) Casa Colorado Black-on-White (Mera, 1935)	- 2 sherds
(3) Miscellaneous Chupadero	- 70 sherds
(4) Tabira Black-on-White (Toulouse, 1949)	- 279 sherds
(5) Tabira Plain (Toulouse, 1949)	- 105 sherds
(6) Unnamed Miscellaneous Tabira	- 25 sherds

Here, as elsewhere in the area, the black-on-white pottery of the Chupadero Ware dominated the identifiable, decorated pottery types and retained its popularity until the general abandonment of the region about A. D. 1672-1678 (Hackett, 1937, p. 298). Mera (1931, 1935) has described the two types, Chupadero Black-on-White and Casa Colorado Black-on-White, and has discussed their significance. It is noteworthy that the late, smoothed surface, Rio Grande Valley form, Casa Colorado Black-on-White, is represented by but two sherds at Pueblo Pardo. The Tabira types were first isolated at San Gregorio de Abo and Toulouse has briefly discussed them in the report of that excavation (Toulouse, 1949, pp. 18-19). Full descriptions, though, lacking in the Abo report, will be given below. The type Tabira Polychrome which was represented in the Abo collections is significantly absent from the Pueblo Pardo material.

Tabira Black-on-White (Figures 21, 22, and 23): Chupadero Mesa and the immediate vicinity is the principal provenience of this type. It is a coiled pottery, with temper of fine, whitish or greyish inclusions and very fine textured, grey core. The surface finish is roughly smoothed, and marks of the smoothing tool are readily discernible. The slip is so thinly applied that the under body is seen in many places. Shapes include vases, ollas, and rarely, bowls or seed bowls (Figure 23). Bases are slightly flattened, and some disc bases are present on vases. Decorations are conventionalized flower and feather elements, checked patterns, diagonals, and bands, with attached angular and rounded volutes, solid opposed stepped elements, and occasional outlined insects and animal and human figures (Figure 21), done in mineral paint. Lugs are bi-lobed, some incised and some of two, rolled pieces of clay. Mera (1931, pl. 7; 1935, p. 31) has referred to this pottery as Chupadero Black-on-White with "modern features of design".

Tabira Plain: This type also is characteristic of the Chupadero Mesa area. It is a coiled pottery with temper of fine, whitish, and greyish inclusions and very fine textured, grey core. The surface finish is roughly smoothed and occasionally unslipped. In the slipped pieces, the slip is thinly applied, and the underbody is seen in many places. Shapes include vases, ollas, "soup plates", bowls, and seed bowls. Lugs are bi-lobed, and bases are slightly rounded. The Chupadero disc base is present on vases.

Unnamed Miscellaneous Tabira: In the Pueblo Pardo collections a few sherds resembling Tabira Black-on-White varied from the usual specimens in temper, surface finish, and decoration. The whitish inclusions in the temper are much larger, and there are also fine, blackish inclusions, probably rootlets or other organic material. The surface treatment is finer, and the black, matte paint is much darker and more thickly applied. Shapes include only ollas and decoration is almost a negative style.

Figure 21. Tabira Black-on-white, (lower right from Gran Quivira National Monument)

Rio Grande Glaze Paint Ware

(1)	Agua Fria Glaze-on-Red (Mera, 1933) Glaze A	- 56 sherds
(2)	San Clemente Glaze-Polychrome (Mera, 1933) Glaze A	- 4 sherds
(3)	Cieneguilla Glaze-on-Yellow (Mera, 1933) Glaze A	- 7 sherds
(4)	Rayo Glaze-on-Red (Mera, 1933) Glaze A	- 1 sherd
(5)	Largo Glaze-Polychrome (Mera, 1933) Glaze B	- 2 sherds
(6)	Espanosa Glaze-Polychrome (Mera, 1933) Glaze C	- 13 sherds
(7)	Kuaua Glaze-Polychrome (Mera, 1933) Glaze C	- 1 sherd
(8)	San Lazaro Glaze-Polychrome (Mera, 1933) Glaze D	- 34 sherds
(9)	Puaray Glaze-Polychrome (Mera, 1933) Glaze E	- 12 sherds
(10)	Tiguex Glaze-Polychrome (Mera, 1933) Glaze E	- 10 sherds
(11)	Trenaquel Glaze-Polychrome (Mera, 1933) Glaze E	- 2 sherds
(12)	Kotyiti Glaze-Polychrome (Mera, 1933) Glaze F	- 93 sherds
(13)	Jornada Late Variant (Shepard, 1942)	- 38 sherds

Mera has discussed all of the types of this glaze-paint sequence, and Shepard (1942, pp. 129-262) has analysed them by technological methods, isolating local variants. As it is difficult to determine the temper of the varieties of glaze-paint sherds without recourse to technological analysis, only those sherds listed above could be definitely identified. Many of the sherds, lumped in the category of Miscellaneous Glaze-Paint Sherds, no doubt fall into one or another of the above types. It is to be noted that nearly all of the types of this ware are present in the Pueblo Pardo collections, but that Glazes A and F are the only two occurring in quantity. The Glaze A sherds tend to cluster in the lower levels of the site and the Glaze F sherds are dominant in the upper levels.

Intrusive Decorated Wares

I. Intrusive Types from the Rio Grande area
   (1) Sankawi Black-on-Cream (Mera, 1932) — 1 sherd
   (2) Abiquiu Black-on Grey (Kidder, 1931, 1936) Biscuit A — 8 sherds
   (3) Bandelier Black-on-Grey (Kidder, 1931, 1936) Biscuit B — 3 sherds
   (4) Unnamed Red-on-Buff — 3 sherds
   (5) Unnamed Red "Brick" Ware (Toulouse, 1949) — 13 sherds
   (6) Salinas Redware (Toulouse, 1949) — 13 sherds
   (7) Unnamed Rio Puerco Glaze Polychrome — 12 sherds

II. Intrusive Types from the Little Colorado area
   (1) Zuni Glazes — 3 sherds
   (2) Heshotauthla Polychrome (Kidder, 1936) — 4 sherds

The first three of the above-named types have been described, and only their presence in minor quantities need be noted here. The Red "Brick" Ware and the Salinas Redware were both described from the Mission ruin of San Gregorio de Abo, and the former appears to be a late intrusive type from the Rio Grande valley, the latter manufactured locally. Two other types, though minor elements in the Pueblo Pardo ceramic inventory, may be described.

Unnamed Red-on Buff (Figure 24, a-b): This type appears to have its principal provenience in the vicinity of Laguna Pueblo (New Mexico). It is a coiled pottery, with temper of angular fragments of blackish rock and some fragments of lighter-colored rock and a medium-to-course textured core, brick-red on the edges, grading to grey in the center. The buff-colored surface is smoothed and apparently unslipped. Decoration consists of solid lines and crudely made hachures applied in a red-brown paint.

Unnamed Rio Puerco Glaze-Polychrome (Figure 24 C and F): This type has its principal provenience along the Rio Puerco, of the east (New Mexico). It is a coiled pottery with fine-textured, brick-red core and tempered with finely crushed basalt. The crackled surface has a yellowish-buff slip. Decoration is solid and dashed designs of red, matte paint, in zones between black, glaze paint lines. Shapes are ollas and perhaps bowls.

The Zuni Glazes (Figure 24, d-e): These appear to be of three types, all of coiled construction, with their principal provenience in the Zuni area. Type I has predominantly opaque, black angular fragments for temper, a fine-textured core, a thick, flesh-colored slip, simple, paralled-sided rim, and is decorated in red, matte paint and green, glaze paint (Figure 24, d). Type II is tempered with predominantly opaque, light-colored, angular fragments, has a fine-textured, grey core, and a well-smoothed surface finish. It has a white slip on the interior and a red slip on the exterior. It is decorated with red, matte paint and green, glaze paint. Type III is tempered with predominantly opaque, light-colored, angular fragments and occasional black fragments. It has a very fine, textured, brick-red core, and the surface is well smoothed. The interior surface has a red slip, and the exterior surface a white slip. Decoration is in a red, matte paint and heavy, brown, glaze paint limited to the exterior.

Plain Brown Wares

I. Jornada Brownware
   (1) Jornada Brown (Mera, 1943) — 94 sherds
   (2) Jornada Brown, smudged interior — 60 sherds

II. Alma Brownware
   (1) Alma Plain (Haury, 1936, a) — 13 sherds

The Jornada Brown pottery has been named and described by Mera and discussed at length by Lehmer (1948), and the Alma Plain pottery by Haury. The presence of a considerable quantity of the Jornada sherds at Pueblo Pardo is, however, noteworthy, and a variant of the described Jornada Brown type appears to merit designation as a new type.

Jornada Brown, Smudged Interior: This is a coiled pottery, with brown-to-black core of medium-to-coarse texture. Temper consists of large, opaque, light-colored fragments and some mica. The surface finish is roughly smoothed on the exterior, and the interiors are heavily smudged. Surface color is that of the type Jornada Brown. Vessel shapes are bowls. Sherds of this type, like those of the parent type, tend to crumble upon breakage.

Grey Utility Wares

(1) Unnamed, plain, smoothed (Toulouse, 1949) — 1,366 sherds
(2) Indented Blind-Corrugated (Kidder, 1936) — 16 sherds

Kidder has discussed the Indented Blind-Corrugated utility pottery from the Forked Lighting Ruin (Kidder, 1936, pp. 304-5). It is a minor element in the Pueblo Pardo inventory. The unnamed, plain smoothed utility ware, however, looms large in the collections. Toulouse briefly discussed this pottery in the Abo report (1949, p. 14), but a more complete description of the type, based on both collections, follows.

Plain Smoothed: This is a coiled utility pottery with a black core of fine-to-medium texture and tempered with large, opaque, and occasionally, translucent white fragments. The surface is roughly smoothed, and marks of the smoothing tool are evident. The surface color is greyish in unused specimens and black with soot in used vessels. Duck-shaped bowls and flaring-mouthed ollas constitute the vessel shapes.

Miscellaneous Glaze Paint Wares

Miscellaneous Glaze Paint sherds - 1,262 sherds

This large group of specimens, lacking technological determinations, could not be distinguished as to specific types. They occurred predominantly in the upper levels of the rooms, and probably, for the most part, belong to various of the types of the Rio Grande Glaze Paint sequence, although other types, no doubt, are present.

Clay Objects

Pipe (1)

The bowl of an elbow (?) pipe made of soft, unslipped redware, ground to shape, is 1.25 inches in diameter and 1.6 inches high. The bore is 0.75 inch in diameter and tapers toward the bottom. A heavy, broad ridge just below the bowl rim is the only decoration. The inside of the bore is burned black from use.

Worked Potsherds (5)

Five potsherds, re-used after breakage, were found. One circular specimen was of a glaze ware, as were two very finely chipped and smoothed rectangular specimens. Two roughly chipped, circular examples were of culinary ware. All of these had the edges ground smooth, but in four of them this smoothing was further modified by chipping.

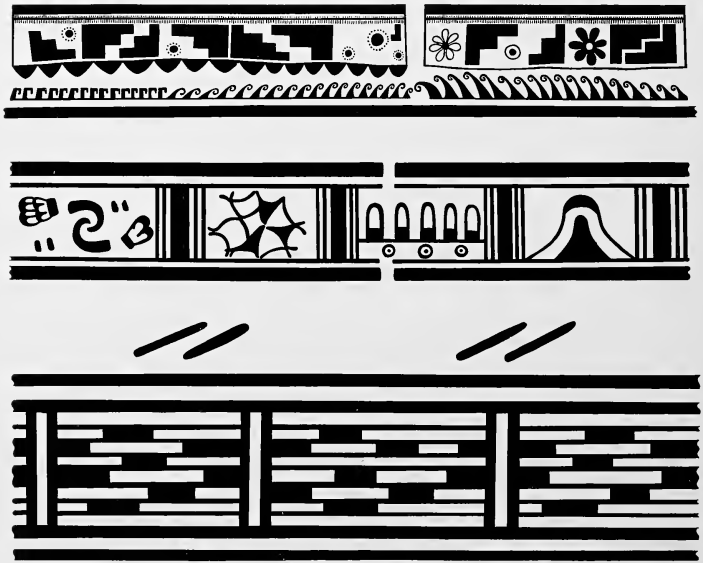


Figure 22. Designs from Tabira Black-on-white

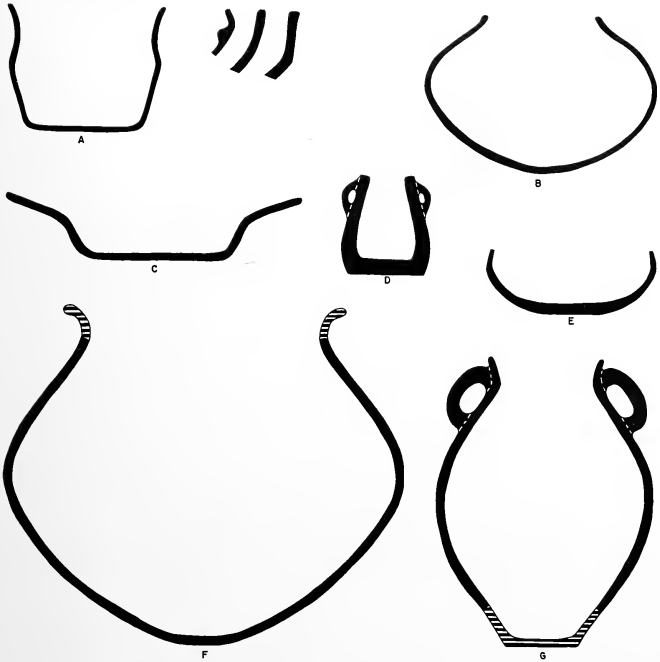


Figure 23. Tabira Black-on-white vessel shapes

Artifacts

Non-pottery artifacts were not abundant in the 1941 excavations at Pueblo Pardo. The field catalog lists but 338 specimens, of which 38 were discarded as being too fragmentary or showing too little usage to be meaningfully identified. Objects of ground or pecked stone, principally manos and metates, dominate the inventory, comprising over 64% of the specimens. Objects of chipped stone, bone, antler, shell, and clay comprise the remaining 36%. In the following descriptions of these specimens, dimensions are given, in inches, as averages, if the size ranges are not great; otherwise ranges of size are also indicated.

Manos (56)

(a) Manos with a single grinding surface (6 specimens) are rectangular with rounded corners. One surface is convex, and the opposite surface flat, for grinding. They averaged 9.8 inches by 4.7 inches by 3.8 inches thick (Figure 26, a).

(b) Manos with two grinding surfaces (33 specimens) are rectangular with rounded corners. One surface is gently convex and the opposite surface flat, but both surfaces used for grinding. Much thinner than those of group (a), these averaged 8.5 inches by 4.5 inches by 1.6 inches thick (Figure 26, b).

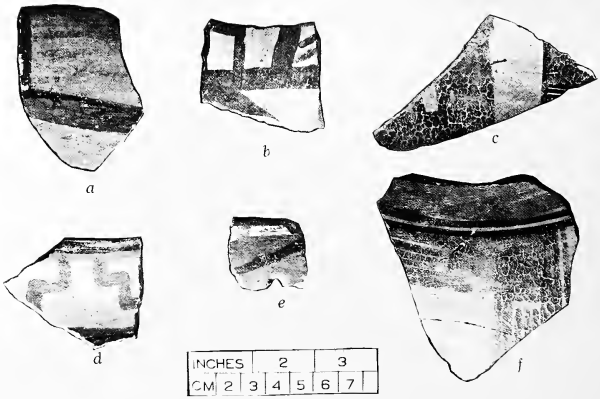


Figure 24. a-b, Unnamed Red-on-buff; c and f, unnamed Rio Puerco glaze polychrome; d and e, Zuni glazes

(c) Manos with two grinding surfaces, both of which are convex (3 specimens) are elongated ovals in outline, less carefully made, and notably narrower than those of the other groups. They averaged 7.5 inches by 3.3 inches by 2.3 inches thick (Figure 26, c).

(d) Manos with three grinding surfaces (14 specimens) are rectangular with rounded corners. One surface is flat and the opposite surface has two intersecting planes forming a medial ridge. All three surfaces are well worn by grinding. Larger and thinner than the other groups, these measure 11.7 inches by 4.0 inches by 1.1 inches thick (Figure 26, d). All examples are sandstone.

Rubbing Stones (35)

(a) Unifaced rubbing stones (8 specimens) are roughly oval in outline with one flat, or slightly convex surface used for grinding. The opposite surface is irregular and unshaped, or only slightly shaped by pecking. They are 5.2 inches by 3.8 inches by 1.5 inches thick (Figure 27, top).

(b) Bi-faced rubbing stones (27 specimens) are well shaped, oval stones with one flat grinding surface and the opposite grinding surface rolled to a slight medial ridge. They are 3.7 inches by 3.3 inches by 1.6 inches thick (Figure 27, bottom). All are sandstone.

Metates (35)

(a) Slab metates (21 specimens) are rectangular with rounded corners, have a wedge-shaped, longitudinal cross section and a laterally concave surface. They are usually well shaped, and measured 16.0 inches by 10.5 inches by 7.0 inches thick. Only one unbroken specimen was found (Figure 28, a).

(b) Basin metates (5 specimens) are thin, with an oval concavity covering most of the working surface. The concavity is 1.5 inches deep and the unbroken specimen was 20.0 inches by 12.0 inches by 3.4 inches thick. Broken specimens had been about the same size (Figure 28, b).

(c) Grooved metates (9 specimens) were usually very well shaped in rectangular outline. The working surface is ground into a wide, longitudinal trough, open at one end and becoming shallower at the opposite end to terminate in a flat, smooth shelf, 1 inch to 6 inches wide. They are 20.2 inches by 12.0 inches by 1.8 inches thick. The groove is 1.0 inch to 1.5 inches deep (Figure 28, c).

Mortars (6)

(a) Mortars made from roughly shaped sandstone pebbles with a concavity pecked into one surface (2 specimens) are round or sub-rectangular in outline and measure 5.0 inches by 4.0 inches by 2.0 inches thick. The concavity is 3.0 inches by 2.0 inches by 1.2 inches deep. Traces of pigment adhere to one specimen (Figure 29, a).

(b) Mortars made from roughly shaped, or unshaped slabs or boulders of sandstone (4 specimens) are irregular in outline and are 11.5 inches by 9.5 inches by 4.5 inches thick. The round concavity ground into the flat surface is 3.3 inches in diameter and 0.3 inch deep. Traces of pigment adhere to the inside of the concavity in one specimen (Figure 29, b).

Palettes (21)

Thin slabs of limestone and sandstone appear to have been used as paint palettes. They are rectangular with rounded corners, to oval, in outline, and one specimen is nearly circular. Three of them have a slightly concave working surface on both sides, and the remainder have only a single concave working surface. In all cases, the concave surface is smooth and contains traces of red pigment. A few are made from broken manos. They range from 9.0 inches by 6.0 inches by 2.0 inches thick to 5.0 inches by 4.0 inches by 0.7 inch thick (Figure 29, c and d).

Maul (1)

A single, complete, full-grooved maul with blunt, battered ends showing evidence of extensive use, is made of sandstone and measures 5.8 inches by 4.0 inches by 1.9 inches thick (Figure 30).

Hammerstones (16)

Simple, round, balls of sandstone, limestone, basalt, granite, quartzite, and quartz, ranging from 3.2 inches to 0.8 inch in diameter, may have served as hammerstones. All are uniformly shaped by pecking on all surfaces. Two specimens had shallow, encircling grooves (Figure 30).

Anvils (4)

These are small stones with shallow, irregular depressions battered into one or both surfaces. Two are made from broken sandstone manos (Figure 31, a) and two are made from small quartzite and limestone pebbles (Figure 31, b). They measure 2.8 inches by 2.5 inches by 1.7 inches thick, and the depression is 1.0 inch in diameter by 0.5 inch deep.

POTTERY TYPE	TOP SMALL FLOOR	TOP SMALL FLOOR	TOP SMALL FLOOR	TOP SMALL FLOOR	BOTTOM HOUSE FILL	BOTTOM HOUSE FILL	BURIAL A (CREMA)	TOP SMALL FLOOR	TOP FLOOR	MIDDLE FLOOR	BOTTOM FLOOR	BELOW FLOORS	TOP FLOOR FILL	TOP FLOOR	BURIAL 13 (THOMAS)	TOP FLOOR	BOTTOM FLOORS	BURIAL 7 (CREAM)	BURIAL A (CREAM)	TOP FLOOR	MIDDLE FLOOR	BOTTOM FLOOR	TOP FLOOR FILL	TOP FLOOR	BOTTOM FLOORS	TOP FLOOR	MIDDLE FLOOR	TOP FLOOR FILL	TOP FLOOR	BOTTOM FLOOR	KIVA FILL	FLOOR LEVEL	BELOW FLOOR	TOTALS BY TYPE	% OF TOTAL BY TYPE	TOTALS BY GROUP	% OF TOTAL BY GROUP
ROOM #	1	2	3	4	5	5A	5A	6	7	7	7	7	8	8	8	9	9	9	9	10	10	10	11	12	12	12	13	13	14	14	14	KIVA A						
CHUPADERO WHITE WARE																																						
CHUPADERO B/W	6			3	1	7	4		4	19		3		3	12				1		2	1	2	1				2	3		1	3			80	2.1		
MISCEL. CHUPADERO					14	9	6			29																						12			70	1.9		
CASA COLORADO B/W						2																													2	.7	561	15.1
TABIRA B/W	4	2	5	19	11	3	7	9	7	23	9	1	3	16	32	6	4			9	12	2	6	1	5	6	6	13	9	13	9	9	3	7		279	7.5		
TABIRA PLAIN	8				1					12				3	20		8		2		11	9	5	4	7	7	8								105	2.8		
MISCEL. TABIRA									16		9																									25	.7		
RIO GRANDE GLAZE PAINT WARE																																						
AQUA FRIA GLAZE-ON-RED (A)				2	2	3	1		8	1	3			4	3	2	1		1		3	1		1	1	3		2	1		2	1			36	1.5		
SAN CLEMENTE GLAZE POLY (A)					1				1	1																				1					4	.01		
CIENEGUILLA GLAZE-ON-YELLOW (A)				1	1	1									1								1					1			1			7	.02		
RATO GLAZE-ON-RED (A)					1																														1	.1		
LARGO GLAZE POLY (B)															1																	1			2	.7		
ESPINOSA GLAZE POLY (C)						1			8						1	1				1	1														13	0.4	273	7.3
KUAUA GLAZE POLY (C)										1																									1	.1		
SAN LAZARO GLAZE POLY (D)			1	1	1			1	2	10	2			2		3	1			1	1	1		3			1	3							34	0.9		
PUARAY GLAZE POLY (E)	1			3	1					1	1	1		1													1	1			1				12	0.3		
TIGUEX GLAZE POLY (E)					1					1	3										1										2	1			10	0.3		
TEWANUEL GLAZE POLY (E)																													1	1					2	.1		
KOTYITI GLAZE POLY (F)	1	1	4	3	13		1	1	3		1	2		48			2	3	1	4	4		3		7		5	7	7	4		1	3	2	131	3.3		
INTRUSIVE DECORATED WARES																																						
SANWAN B/R																							1												1	.1		
ABIQUIU B/G									1				1	1	4														1						8	0.2		
BANDELIER B/R															1								1			1									3	0.1		
UNNAMED B/R									2	1																									3	0.1		
UNNAMED RED "BRICK" WARE	1								3		3		1														3	2							13	0.4	60	1.6
SALINAS REDWARE					3				4	3		1	2																						13	0.4		
"RIO PUERCO" GLAZE POLY													2	6									2					1	1						12	0.3		
"LINE" GLAZES									1				2																						3	0.1		
MESHOTAUTHLA POLY													2										1						1						4	0.1		
PLAIN BROWN WARES																																						
WOHNAGA BROWN	6		3		8	2	2	3		5	1	2	2		4	2	4	2		8	1	1		7	3	7	2	3	5		1	10			94	2.6		
WOHNAGA BROWN, SMOOTHED INTERIOR	1			3	4		4		2	8	4	1		3	2		1			2	4		1	2			6	11		1				60	1.6	167	4.6
ALMA PLAIN				12	1																														13	0.4		
UTILITY WARES																																						
UNNAMED PLAIN, SMOOTHED	50	6	29	80	65	46	55	31	4	130		39	12	20	40	31	113	4	3	3	63	52	30	13	36	44	36	62	62	40	4		40	8	3	1366	36.9	1	
INDENTED BLIND-CORREGATED	1				1	3							1	7		1								1		1									16	0.4	1362	33.3
MISCELLANEOUS GLAZES																																						
MISCEL. GLAZE PAINT SHERDS				86	69	41	40	10	67	43	29	19	4	46	196	25	38	19	3		42	41	30	25	43	10	31	9	30	61		9	53	20		1262	34.1	1262	34.1
TOTALS	79	9	42	246	191	124	121	55	21	406	61	71	22	155	462	70	184	30	12	13	145	120	80	48	104	101	90	98	134	151	18	21	29	42	5	3705	100%	3705	100%

Figure 25. Table of pottery by type and location

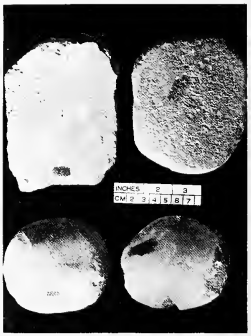


Figure 27. Rubbing stones

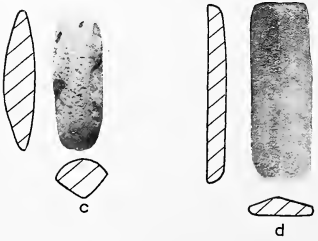


Figure 26. Manos

Polishing Stones (7)

Waterworn quartz and quartzite pebbles with one or more highly polished facets were apparently used as pottery polishers. They are 3.0 inches by 1.5 inches by 1.0 inch thick (Figure 31, c). One small limestone slab, 6.2 inches by 5.9 inches by 1.8 inches thick with a smoothed, flat surface, probably was a floor or wall polisher (Figure 27).

Arrowshaft Tools (5)

Four of these are well-made shaft straighteners and abraders of limestone and micaceous schist. Two have parallel, longitudinal grooves separated by a narrow ridge which is transversely notched. A third has but one groove and a parallel, notched ridge, and the fourth has a single groove and un-notched ridge. All four are polished on all working surfaces from usage. The fifth specimen is crudely made of coarse sandstone, with a single, wider groove, but no ridge or notches. They are 3.5 inches by 2.8 inches by 1.5 inches thick (Figure 32).

Griddles (3)

These large, thin, rectangular, sandstone slabs are well-shaped, with rounded corners and one smoothed surface. They are 23.4 inches by 13.2 inches by 0.8 inch thick, and probably were used as griddles to be set over the three "fire-dogs" in the firepit.

Sipapu (1)

A rectangular slab of limestone, 7.2 inches by 6.8 inches by 1.8 inches thick, imbedded in the floor in the center of the kiva, had a rectangular pit carved into its upper surface. The pit is 3.6 inches by 3.1 inches by 0.4 inch deep (Figure 37, b).

Figurine (1)

A carved animal figurine with four stubby legs, a short tail, a head with incised eyes and mouth, and a transverse groove along the entire length of the ventral side was made of gypsum and measured 3.7 inches by 1.3 inches by 1.1 inches high (Figure 33, b).

Pendant (1)

A small, ovoid piece of gypsum, diagonally perforated at one end, with a partial, lateral groove intersecting one end of the perforation, resembles an oliva shell. It is 1.3 inches by 0.7 inch by 0.3 inch thick (Figure 33, a).

Projectile Points (4)

(a) One crude, triangular projectile point, 1.5 inches by 0.8 inch by 0.2 inch thick, was made of silicified alibates dolomite. One edge is beveled, and the uneven base suggests that it may have been re-chipped from a larger blade (Figure 34, a).

(b) One contracting-stemmed projectile point, 1.8 inches by 0.8 inch by 0.25 inch thick, was made of red jasper. The shoulders are square, but the specimen is poorly made (Figure 34, b).

(c) One expanding-stemmed projectile point, 1.3 inches by 0.8 inch by 0.2 inch thick was made of white chalcedony. The corner-notches are V-shaped and the base is convex (Figure 34, c).

(d) One side-notched projectile point, 1.0 inch by 0.4 inch by 0.1 inch thick was made of brown chalcedony. It has a concave base and two opposing side-notches, and is well made (Figure 34, d).

Drills (2)

A single drill-shaft of moss agate, 2.1 inches by 0.3 inch by 0.2 inch thick, has a blunted point at each end (Figure 34, e). The other specimen is represented only by a triangular base of the shaft and is made of jasper (Figure 34, f).

Blades (2)

A piece of limestone and a piece of micaceous schist, chipped along both edges, may have served as large blades. Both are broken, and length is therefore indeterminate, but they are 2.2 inches wide and 0.3 inch thick (Figure 34, g).

Scrapers (4)

Two side scrapers of white chalcedony with working edges chipped along both long sides are 1.5 inches by 1.0 inch by 0.4 inch thick (Figure 34, h). Two snub-nose end scrapers of grey chalcedony with minor working edges chipped along both long sides and a major working edge on the wide end are 1.0 inch by 0.7 inch by 0.6 inch thick (Figure 34, i).

Figure 29. Mortars and palettes

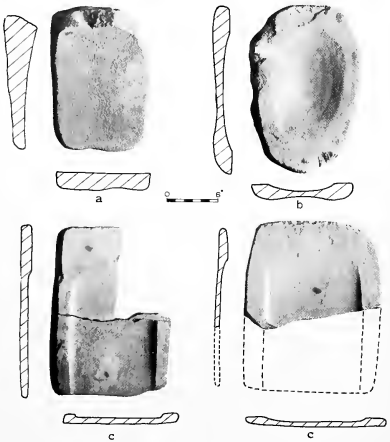


Figure 28. Metates

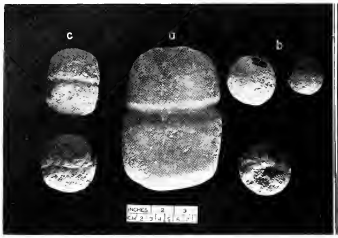


Figure 30. Mauls and hammerstones

Figure 31. a-b, Anvils; c, pottery polisher and d, floor polishers

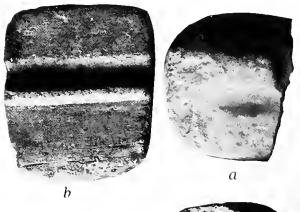


Figure 32. Arrowshaft tools

Figure 33. a, Pendant; b, Figurine

Stone Discs (36)

(a) Roughly chipped, limestone and sandstone discs of 2.5 inches to 4.0 inches diameter and 0.5 inch to 1.0 inch thickness (18 specimens) have broad, vertical edges with no evidence of a cutting or scraping edge (Figure 35, a).

(b) Hemispherical, roughly chipped basalt and sandstone discs of 2.0 inches diameter and 1.0 inch thickness (7 specimens) have battered, sharp edges suggesting use as small hammers (Figure 35, b).

(c) Larger, limestone discs of 4.0 inches diameter and 3.0 inches thickness (10 specimens) have one sharply chipped, cutting edge. The opposite edge is chipped and ground to a blunt, round surface. These probably served as choppers (Figure 36).

(d) One thin, limestone disc, chipped around the edges in an irregular outline, 7.4 inches by 5.7 inches by 0.5 inch thick, had a circular hole of 1.7 inches diameter chipped evenly in the center (Figure 37, c).

Miscellaneous Stone Objects (7)

Two small, quartz crystals, three limestone concretions, and a fossil snail cast were found in a group near the firepit on the lower floor of Room 7. A large quartz crystal was found on the floor of the kiva.

Bone Awls (12)

(a) Two ulna awls of deer or antelope bone with the head intact were 4.7 inches long (Figure 38, a).

(b) Two split bone awls of deer or antelope metapodials with head intact were 3.0 inches long, and highly polished (Figure 38, b).

(c) Four split bone awls of deer or antelope metapodials with head partly or wholly removed were 4.5 inches long, and highly polished (Figure 38, c-d).

(d) Four split bone awl tips with the heads broken off were of unknown length (Figure 38, e).

Bone Spatulas (3)

Two small deer or antelope ribs ground to spatulate form are 4.4 inches long and polished from usage (Figure 39, a). A single spatula, made of a deer or antelope scapula section, is 2.6 inches long, with a beveled fore-edge (Figure 39, b).

Bone Flaking Tool (1)

This highly polished, well-shaped specimen of bison (?) rib is rectangular in cross-section and has a slightly roughened point on one end and a rounded, roughened, opposite end. It is 3.2 inches long (Figure 39, c).

Bone Pendant (1)

A well-shaped, smoothed fragment of bison (?) scapula is oval in outline, with two drilled perforations. One perforation is near the center, and one is near the edge. Both have polished interiors. About one third of this pendant is missing, but the remaining portion is 3.2 inches long, 2.4 inches wide, and 0.1 inch thick (Figure 39, d).

Bone Flageolet (1)

A turkey leg bone with at least two lateral perforations, each 0.25 inch in diameter and 1.5 inches apart is 4.6 inches long (Figure 40, a).

Bone Beads (19)

Tubular bone beads made of sections of bird leg or wing bones with well-polished, cut ends range in length from 0.4 inch to 4.9 inches and in diameter from 0.2 inch to 0.5 inch (Figure 40, b-e). Four of these beads are incised with grooves around the ends or middle, or with partial grooves and vertical incisions near one end. One pair of beads was found telescoped (Figure 40, e).

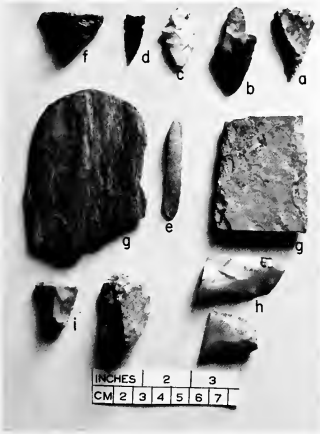


Figure 34. a-d, Projectile points; e-f, Drills; g, Blades; h-i, scrapers

Miscellaneous Bone Objects (4)

Two cut, turkey leg bones appear to be discards from bone-bead manufacture (Figure 39, e). The cut end of a small mammal bone (Figure 39, f) and a cut splinter of a larger mammal leg bone (Figure 39, g) complete the worked bone inventory.

Antler Flaking Tools (3)

Antler tips with blunted, scratched ends average 5.0 inches in length and are unusually stocky. One specimen is longitudinally cut, but they are otherwise unaltered, except by usage (Figure 39,

Shell Objects (3)

Two pendants of fresh-water mussel shells (Lampsitis purpuratus Lamark) were found. One had the lip ground off straight and the edge polished, and notched with fine incisions. It had a small, drilled perforation near the hinge and another near the center of the lip, thus forming a triangular pendant with perforations at the apex and center of the base. The other pendant was burned in a cremation (Burial 24), and only fragments remained, but at least one perforation, near the hinge, was apparent.

One small shell bead of Olivella dama Mawe is perforated longitudinally.

Figure 35. Stone discs

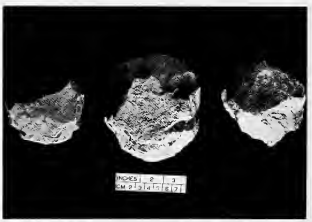


Figure 36. Stone discs or choppers

TABLE I

ARTIFACT DISTRIBUTION BY FOCI

	PC	PP
Manos		
Fig. 26a	3	3
Fig. 26b	5	22
Fig. 26c		3
Fig. 26d	8	8
Rubbing Stones		
Fig. 27a	2	6
Fig. 27b	2	19
Metates		
Fig. 28a	2	13
Fig. 28b	3	2
Fig. 28c	2	7
Mortars and Palettes		
Fig. 29a		2
Fig. 29b	2	2
Fig. 29c	8	12
Fig. 29d	1	
Mauls and Hammerstones		
Fig. 30a	1	
Fig. 30b	7	7
Fig. 30c	1	1
Anvils and Polishers		
Fig. 31a	1	1
Fig. 31b		2
Fig. 31c	3	3
Fig. 31d		1

	PC	PP
Arrowshaft Tools		
Fig. 32a	1	2
Fig. 32b		1
Pendant and Figurine		
Fig. 33a	1	
Fig. 33b		1
Chipped Stone		
Fig. 34a		1
Fig. 34b	1	
Fig. 34c	1	
Fig. 34d	1	
Fig. 34e		1
Fig. 34f		1
Fig. 34g	1	1
Fig. 34h	1	1
Fig. 34i	1	1
Stone Discs		
Fig. 35a	3	15
Fig. 35b	2	
Choppers		
Fig. 36		10
Sipapu and Perforated Stone		
Fig. 37a		1
Fig. 37b	1	

	PC	PP
Bone Awls		
Fig. 38a	2	
Fig. 38b	1	1
Fig. 38c		2
Fig. 38d	1	1
Fig. 38e	2	1
Bone Spatulas, Pin, etc.		
Fig. 39a	2	
Fig. 39b		1
Fig. 39c		1
Fig. 39d	1	
Fig. 39e	2	
Fig. 39f		1
Fig. 39g	1	
Flute and Beads		
Fig. 40a	1	
Fig. 40b		1
Fig. 40c	6	2
Fig. 40d	4	1
Fig. 40e	4	1

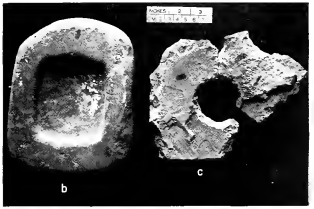


Figure 37. Sipapu and stone disc

Figure 38. Bone awls

Figure 39. a-b, Bone spatulas; c, bone pin; d, perforated scapula; e-f, cut bone; g, bone splinter; h, antler flakers

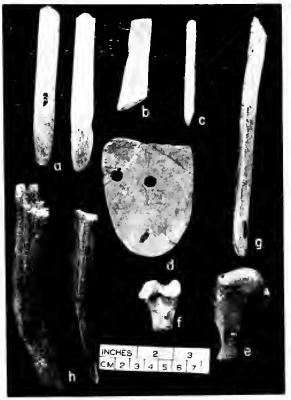
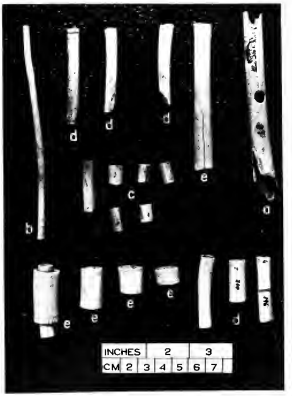


Figure 40. a, flute or flageolet; b-e, beads



Burials

The single season of excavations at Pueblo Pardo provided a total of thirty-six burials (Figure 42). Seven of these were cremations, seventeen were flexed inhumations, eight were extended inhumations, and four were inhumations too fragmentary to distinguish the position.

Cremated remains were all buried in small, circular pits excavated beneath the floors and in four instances down into bedrock. Three cremations were between the lower and upper floors in Rooms 5A, 9, and 14, and presumably post-date the lower floor occupation. Four were beneath the lower floors in Rooms 7, 9, 11, and 12 and presumably belong with the lower floor occupation. This separation is supported by the few pottery fragments associated with the cremations. No evidence of crematory pits was found, and presumably these were outside the rooms. All of the cremations were of adult individuals.

Extended inhumations were all in large, oval cists, three of which were stone-lined beneath the floors. Five of these burials were associated with the upper floor of Rooms 4 and 11. The other three were sealed over by the top floor of Room 8 and presumably associated with the earlier occupation of that room. These three were infants, as were two of those in the upper levels. Three of the upper level, extended inhumations were adults.

Flexed inhumations (Figure 41) were in small, oval cists, three of which were stone-lined, beneath the floors. Eight were associated with the lower levels of Rooms 5A, 8, and 10, and nine with the upper levels of Rooms 4, 8, 9, 11, 12, and 13. Age was difficult to determine in these burials, but at least three of those in the lower levels were infants, and of those in the upper levels, one was an infant and three were adults.

Although the stratigraphic position of each of these thirty-six burials was evident, and a separation could be made between upper and lower levels, no pattern of burial types could be determined for either level. All burial characteristics were found in both levels in roughly equal proportions. Even the cremations and inhumations were each about equally divided between the two levels. Rooms 2, 3, and 5, all of which are single-floor, late rooms, were the only rooms with no burials, but it is difficult to attach any significance to this fact. One might assume, on the basis of the burial evidence alone, either (a) a single occupation of the village by people with several sets of burial customs, or (b) multiple, but simultaneous occupation by different groups of people each with its own set of burial customs. A third alternative, of course, is that possibly some incorrect associations have been made of burials with floor levels. In any event, cremations are in the minority, although six ash pits, not listed as cremations, might have actually been cremations.

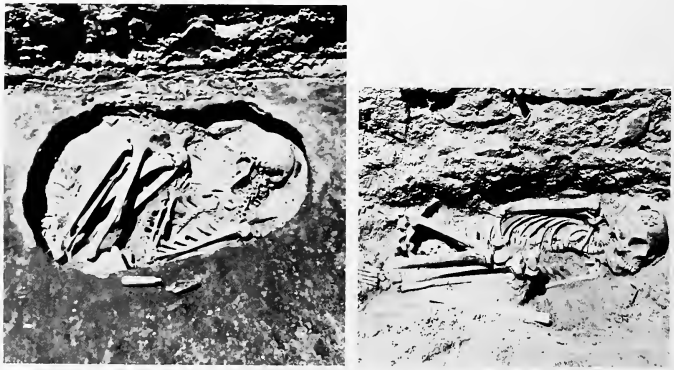


Figure 41. Burials from Pueblo Pardo

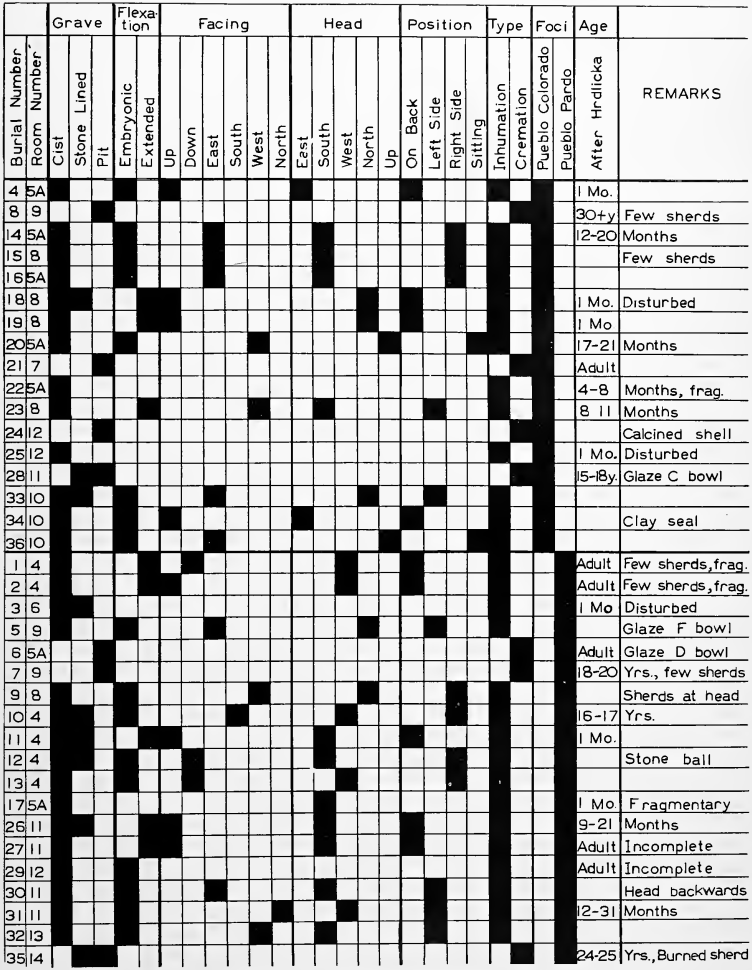


Figure 42. Flexed inhumations

Food Remains

Mammals

EARLY PERIOD

Lepus (Jack rabbit)
Partial skull (1), left incisor (1), left ascending ramus (1), right ramus (complete except for teeth) (1), proximal end of ribs (2), partial ribs (2), fragment of os innominatum (1/2 pelvis) (1), right scapula (1), proximal end of left radius (1), right humerus (1), proximal end of left humerus (1), proximal end of left ulnae (2), left femur (1), proximal end of right femur (1), distal end of right femurs (2), proximal end of right tibia (1), metatarsal right II (1), metatarsal right III (1), metatarsal right IV (1), metatarsal left III (1), metatarsal left IV (1), right calcanei (2).

Sylvilagus (Cottontail rabbit)
Proximal end of left tibia (immature)(1), proximal end of right tibia (1), distal end of right tibiae (2), distal end of left tibia (1), distal end of right tibiae (immature)(2), distal end of left tibiae (immature)(2), right metatarsal III (1), right metatarsal IV (1), left metatarsal III (1), left metatarsal IV (1), lumbar vertebrae (4), right calcaneus (1), right scapula (1), partial right scapulae (2), left rami (2), partial right rami (2), proximal end of right femur (1), proximal end of left femur (1), distal end of right femurs (2), right femurs (3), left radii (2), partial left radius (1), right radius (1), right radius (immature)(1), partial right radii (3), right ulnae (2), left os innominatum (1/2 pelvis)(1), partial left os innominata (2), partial right os innominata (4), left humeri (5), left humeri (immature)(3), proximal end of left humerus (1), distal end of left humerus (1), right humeri (2), proximal end of humerus (1).

KIVA #1
Bison(?)
Distal end of left radius, ulna attached (1), rib fragments (3), partial calcaneum (1), intermediate phalange (1), fragment of epiphysis of metapodial (1), head of femur (1).

Canis Latrans (Coyote)
Right humerus (1).

Taxidea Taxus (Badger)
Right ramus (1).

Dipodomys (Kangaroo rat)
Right femur (immature) (2)

Geomys (Pocket gopher)
Right femur (1).

Cynomys (Prairie dog)
Right ramus (1), left ramus (1), partial right ramus (1), right humerus (1), left ulna (1), left ulna (immature)(1), left femur (immature)(1), right femur (immature) (1), right tibia (immature) (1).

Antilocapra (Antelope)
Naviculo - cuboid, right (2), left naviculo - cuboid (1), proximal end of right tibiae (2), distal end of left tibia (1), distal end of metacarpal (1), distal epiphysis of metapodial (1), proximal end of left metacarpal (1), partial right os innominata (2), partial left os innominata (2), segments of sternum (immature) (2), cuneiform (1), left astragalus (1), right astragali (2), thoracic vertebrae (1), right proximal phalanges (6), left proximal phalanges (3), right intermediate phalanges (4), terminal phalange (1), partial proximal phalange (1), proximal end of right radius (1), distal end of left radius (1), proximal end of left humerus (1), distal end of left humerus (1), distal end of right humerus (1), proximal end of left femur (1), left calcaneum (1), right ramus (1), right scapula (1), lumbar vertebrae (4).

Odocoileus (Deer)
Astragalus (1), left intermediate phalange (1), proximal end of right metacarpal (1), lumbar vertebrae (2), lumbar vertebrae (immature) (2), partial right scapula (glenoid fossa intact)(1).

---

1 Identifications by Southwest Archaeological Center, National Park Service.

Lepus (Jack rabbit)
Right scapulae (incomplete)(2), left calcaneum (1), left ulna (1), proximal end of right ulna (1), lumbar vertebrae (3), process from lumbar vertebra (1), distal end of left radii (2), atlas (1), right os innominatum (1), left os innominatum (1), proximal end of right tibia (immature)(1), distal end of right tibia (1), proximal end of left tibia (1), proximal end of right humerus (1), right humerus (immature) (1), distal end of tibia (immature)(1), distal end of left femur (1),proximal end of left femur (1), proximal end of right femur(1), proximal end of right femur (immature) (1), proximal end of rib (1), proximal end of left metatarsals IV (2), right metatarsal (1), proximal end of left metatarsal II (1), distal end of left metatarsal II (1), proximal end of proximal phalange II (1), left astragalus (talus)(1).

Sylvilagus (Cottontail rabbit)
Right metatarsal III (1), left metatarsal III (1), metacarpal IV (1), left ulna (immature) (1), left radii (immature)(2), partial skull (1), fragment of skull (maxilla)(1), partial left ramus (1), right horizontal rami (2), diaphysis of immature left femur (1), left femur (immature)(1), proximal ends of right femurs (4), proximal end of left femurs (3), distal end of right femur (1), right femurs (2), humeri (immature)(1), partial right humeri (3), right humerus (1), right humerus(immature)(1), proximal end of left humerus (1), distal end of left humeri (2), radius (immature)(1), proximal end of left radius (1), right metatarsal IV (1), right metatarsal III (immature)(1), right metatarsal IV (immature)(1), vertebrae (10), rib (1), calcaneum (1), partial left scapulae (2), right os innominata (5), left os innominata (4), partial right os innominata (3), partial left os innominatum (1), left tibia (immature)(1), proximal end of right tibia (immature) (1), proximal end of left tibia (immature)(1), proximal end of right tibi(1), proximal end of left tibia (1), distal end of left tibiae (2), distal end of right tibiae (3).

Antilocapra (Antelope)
Base of skull (occupital condyles intact)(1), partial right ramus (1), proximal end of left humerus (1), distal end of right humerus (1), distal end of metacarpal (1), proximal end of right metacarpals (2), right proximal phalanges (2), left proximal phalanges (2), partial right proximal phalanges (2), right intermediate phalange (1), left intermediate phalange (1), proximal end of ribs (2), segment of sternum (1), transverse process (1), scapula (juvenile)(1), proximal end of left ulna (1), partial left os innominata (2), lumbar vertebra (2), thoracic vertebrae (3).

Odocoileus (Deer)
Right astragalus (1), right calcaneum (1), distal end of right tibia (1), distal end of left tibia (1), proximal end of right femus (1), proximal epiphysis of right femus (1), left proximal phalange (1).

Neotoma (Wood rat)
Right rami (3), left ramus (1), right tibia (immature) (1), left tibiae (immature) (2), partial right humerus (1), left femur (immature (1), right os innominatum (1), left os innominata (2), partial right os innominatum (1), partial left os innominata (2).

Cynomys (Prairie dog)
Complete skull (1), skull (incomplete) (1), right rami (2), left ramus (1).

Citellus variegatus (Rock squirrel)
Partial skull (1), right tibia (1), right femur (immature) (1), left femur (1), left humerus (1), right radius (immature) (1), left (partial)os innominatum (1).

Lynx Rufus (Bob cat)
Partial right maxilla (1).

Felis Concolor (Mountain lion)
Partial terminal phalange (1).

Canis Familiaris (Dog)
Atlas (1), proximal end of right femur (1).

Cratogeomys (Pocket gopher)
Skull (complete) (1).

Peromyscus (Deer mouse)
Partial skull (1).

Conepatus Leuconotus (Hognosed skunk)
Left humerus (1).

Bison (?)
Partial ribs (2).

Ovis (Sheep)
Left ramus (1), distal end of metacarpal (1), proximal end of right tibia (1).

Capra (?) (Goat)
Basioccipital condyles (1), vertebra (immature) (1), patella (1), cuneiform (1), left intermediate phalanges (2).

Bird Remains

Branta canadensis (Canada goose)
Anas sp. (Teal)
Nyroca sp. (Duck)
Aquila chrysaetos (Golden eagle)
Buteo borealis (Red-tailed hawk)
Buteo regalis (Ferruginuous rough-legged hawk)
Buteo swainsoni (Swainson's hawk)
Meleagris gallopavo (turkey)
Quail (Species unidentified)
Speotyto cunicularia (Burrowing owl)
Corvus corax (Raven)

Discussion

During the summer of 1941, fourteen rooms and a kiva were excavated at Pueblo Pardo, a stone-masonry ruin on Chupadero Mesa in central New Mexico. Thirty-six burials, over 3000 potsherds (including several restorable vessel sections) and 300 other artifacts were recovered. The remains, for the most part, are not unusual for the area, suggesting a basically Anasazi (Puebloan) type of culture of a time perhaps as early as the 13th century A. D. and extending to approximately A. D. 1630, plus or minus a decade. The beginning date suggested is uncertain, but based on ceramic evidence. The terminal date is well established upon a combination of historic data and ceramic evidence. Some traits, though, appear to be distinctly out of keeping with the general Puebloan tradition and are ordinarily associated with the Hohokam, the Jornada Branch (Brownware peoples), and the Mimbres Phase of the Mogollon. This mixture, itself, is not unexpected for the area and the time period of the site. The Puebloan area extends over most of the region of New Mexico to the north and northwest of Pueblo Pardo, and the classic site of Pecos is but a hundred miles to the north. The areal limits of the Jornada Branch, as outlined by Lehmer (1948) are less than 40 miles to the south and Jornada sites are found adjacent to Anasazi sites in this area. The culture center of the Mimbres Phase, as suggested by the Cosgroves (1932) is but 150 miles to the southwest. Typical Hohokam sites are farther to the west in southern Arizona.

Architecture: The irregular pattern of unit type, stone-masonry structures with several plazas and well-developed kivas is compatible with Anasazi tradition of the period. This architectural complex, likewise, is not out of keeping with the late sites of the Jornada Branch (Lehmer, 1948) and, like the plain brown pottery, tends to suggest culture mixture of this group with the peripheral Anasazi on a late time level.

Pottery: The decorated, unglazed pottery is dominated by the types Chupadero Black-on-White and Tabira Black-on-White. It seems apparent that the Tabira types developed from the Chupadero Black-on-White. Paste, construction, surface treatment and finish, all appear identical, but something happened to the designs. They changed from the opposed, solid, and hachured triangles and other geometric figures of Chupadero, to designs depicting feathers, flowers, animals, humans, and perhaps insects. The change appears to have taken place gradually, until

2 Identification by Dr. Pierce Brodkorb, Assistant Curator of Birds, Museum of Zoology, University of Michigan; assisted by Mrs. Frances Hamerstrom.

the new style became more popular than the parent Chupadero. Tabira pottery appears in the early levels at Pueblo Pardo, associated with Glaze A sherds, and increases in the upper levels.

The origins of these decorative changes are not at once apparent. The feather element is generally attributed to the Little Colorado area (Chapman, 1927) where it appears late in the Kayenta Branch (Martin and Willis, 1940, pls. 52, 54). The flower elements do not appear elsewhere until modern times, but the use of human and insect representations occur late in the Kayenta Branch (Martin and Willis, 1940, pls. 39, 40, 51, 52, and 56), the Hopi country (Brew 1944, pp. 242-5) and in the Mimbres sites (Cosgrove and Cosgrove, 1932, pls. 192-197).

The disc base and the tall vases or cylindrical vessels are also worthy of note. The disc base occurs in the Chupadero Black-on-White type and carries over into the Tabira Black-on-White. The vase form occurs only in the Tabira types. The disc base, as a distinct entity, does not occur elsewhere in the Southwest, and the only comparable trait is the occurrence of flat bases on certain cups in the Kayenta and Mesa Verde Branches (Martin and Willis, 1940, pls. 8-2, 42-3, 60, 62). The annular bases of certain Mexican wares (Kelly, 1944), suggest interesting resemblance. Almost identical disc bases occur on cylindrical vases in Jalisco and on other vessels in Guatemala (Vaillant, 1932, pls. I-9, and 10, II-28, 29, 30). The only other occurence of tall vases in the Southwest is in the Chaco Branch (Martin and Willis, 1940, pls. 69-5 and 6 at Pueblo Bonito (Pepper, 1920, figs. 42 and 43; pls. 2-6). Again, Mexican similarities are seen in Jalisco and Vera Cruz (Vaillant, 1932, pls. I-9 and 10, III-15 and 16).

The Rio Grande Glaze Paint Ware needs little comment, as it is a normal trait of this area, and Mera (1933) has dealt with it at length. These glaze paint types, together with the intrusive types from the north and northeast of Chupadero Mesa, all appear to be simple Anasazi elements in the Pueblo Pardo material. However, the Jornada variant, as discussed by Shepard, 1942, appears in a small quantity (9 sherds in the early levels and 29 sherds in the late levels).

The Plain Brown Ware suggests strong ceramic relationship with the Mogollon. The Alma Plain type, minor at Pueblo Pardo, occurs in all phases of the Mogollon in southwestern New Mexico. The Jornada Brown, a major pottery at Pueblo Pardo, is a dominant type for the Jornada Branch of the Mogollon in south-central New Mexico. Mera discusses it as a basic element of these "Brownware peoples". The type occurs as a strong element in sites of this area even after the typical "Brownware" sites were abandoned, and its presence in these late sites suggests some sort of cultural fusion of Jornada Branch Mogollon with peripheral Anasazi. The presence of a variant of Jornada Brown, with smudged interior, would not be out of keeping with such a culture shift.

The ceramic complex at Pueblo Pardo, then, is basically Anasazi, with Mogollon elements to be seen in the Plain Brown Wares, with Little Colorado and Pueblo IV Hopi elements to be seen in Tabira designs. The tall cylindrical vases and the disc bases offer but tantalizing suggestions of similarities to traits in Mexico and farther south.

Artifacts: Non-ceramic artifacts, for the most part, are quite generalized and well within the Anasazi tradition. Some elements, though, call attention to possible outside relationships. Three types of metates occur in the Pueblo Pardo material. The flat-surfaced, slab metates, as would be expected, dominate the upper levels of the site, but are also present in the lower levels. Typically Anasazi, this was the only type of metate at Pecos (Kidder, 1932) and at Pa-ako (Lambert, 1954). Lehmer (1948) illustrates examples of all three types for the Jornada Branch, but these seem to be more crudely made specimens than those at Pueblo Pardo, especially the grooved type, which at Pueblo Pardo is very well shaped, with a distinct shallow trough (or groove) and thin. The trough metate is typical of late Mogollon sites in western New Mexico and in earlier Hohokam sites in Arizona.

The rather crudely made paint palettes of Pueblo Pardo, occurring in both upper and lower levels, represent a trait apparently foreign to the area. These were not found at Pecos (Kidder, 1932) nor at Pa-ako (Lambert, 1954) or Pindi (Stubbs and Stallings, 1953). They do occur at Awatovi (Woodbury, 1954, pp. 98-100) and at Pueblo Bonito (Pepper, 1920, p. 86). In Hohokam sites, paint palettes are abundant, and, in late stages of that culture, very elaborate. The cruder, Pueblo Pardo specimens resemble those of the Pioneer Period of the Hohokam.

Burials: Perhaps the most unexpected trait in this site is the occurrence of both cremations and inhumations. Cremation is not, so far as is known, a trait of the Anasazi area, except at Zuni, where Hodge found them in abundance and where they were reported by the early Spanish chroniclers (Toulouse, 1944, pp. 66-68). Neither is it a trait of the Jornada Branch of the Mogollon. Some cremations have been found in the Guadalupe Mountains which Cosgrove (1947, pp. 161-163) believes to have been derived from the Pecos River peoples, and a few have been recovered from Mimbres sites (Cosgrove and Cosgrove, 1932, pp. 25-26). Except for Zuni, though, cremation is subordinate to inhumation in all these sites and occurs in varying proportion to inhumation. In the Hohokam area, however, cremation is the principal burial practice. Trench cremation, with remains of several individuals placed in a long

trench, pit cremations with remains of a single individual placed in a small, shallow pit, and urn cremations with the remains of a single individual placed in a jar or bowl are all common. The pit type seems to be limited to the Pioneer Period of the Hohokam. Mimbres cremations are of both the pit and urn types, and those from the Guadalupe Mountains were placed in bags or baskets. Possibly the practice of pit cremation spread from the Hohokam area, and with a break in trade or other ties, reached central New Mexico through the Mimbres villages at a much later date and with no further elaboration.

Origin of the practice of cremation and the significance of two well-developed, burial practices at Pueblo Pardo, along with the origins of tall cylindrical vessels, and disc bases for pottery vessels pose major problems for further research in this area.

A Culture Sequence for the Pueblo Pardo Area

As mentioned earlier in this report, stratigraphic evidence, supported by the ceramic types, suggest that these village remains represent two occupational levels. A major problem at the end of the 1941 season was the distinguishing between the elements of the two occupations and the sorting of the Puebloan from the non-Puebloan traits. Comparative data were not abundant, and there is still a notable lack of excavated material from this area with which to work. In order to understand the data from Pueblo Pardo better, a survey of archeological materials in the immediate vicinity of Gran Quivira National Monument was undertaken. This survey, actually a continuation of the basic archeological survey of the area begun in 1940, included all of the data from previous investigations and added some new material from surface collections at previously unrecorded sites. On the basis of this work a sequence of archeological foci can be tentatively suggested and, at least ceramically, defined. Within this sequence the two occupations suggested for the Pueblo Pardo remains can be placed as two separate foci, and their individual traits identified. Since most of the survey materials, except for the Pueblo Pardo remains, are surface potsherd collections, each focus will be distinguished only on the basis of the associated ceramic types, and surface architectural features.

Historic Puebloan

Salinas Focus. Type site is San Gregorio de Abo (GQ #15)

Tabira Black-on-White	Salinas Redware
Tabira Polychrome	Mexican Maiolica
Kotyiti Glaze-Polychrome	Plain smoothed utility ware

Proto-Historic Puebloan

Pueblo Pardo Focus. Type site is Pueblo Pardo (GQ #7)

Tabira Black-on-White	Kotyiti Glaze-Polychrome
	San Lazaro Glaze-Polychrome
Tabira Plain	Jornada Brown
Chupadero Black-on-White	Plain smoothed utility ware

Late Prehistoric Puebloan

Pueblo Colorado Focus. Type site is Pueblo Colorado, site 2 (GQ #12)

Chupadero Black-on-White	Largo Glaze-Polychrome
Tabira Black-on-White	Little Colorado Polychrome
Agua Fria Glaze-on-Red	Jornada Brown
Cieneguilla Glaze-on-Yellow	Indented Blind Corrugated

Middle Prehistoric Puebloan

Gran Quivira Focus. Type site is Gran Quivira (early) (GQ #6)

Chupadero Black-on-White	Cieneguilla Glaze-on-Yellow
Agua Fria Glaze-on-Red	Jornada Brown
San Clemente Glaze-Polychrome	Indented Blind Corrugated

Early-Middle Prehistoric Puebloan

Arroyo Seco Focus. Type site is Arroyo Seco Ruin (GQ #3)

Chupadero Black-on-White	Corrugated utility ware (?)
St. Johns Polychrome (?)	

Early-Middle Prehistoric Brownware

Claunch Focus. Type site is an unnamed ruin near the Claunch Ranch (GQ #19)

Jornada Brown	Chupadero Black-on-White
Los Lunas Smudged	Indented corrugated utility
San Francisco Red	

The Claunch Focus appears to be contemporaneous with the Arroyo Seco Focus. Typical sites are found in low, sandy places, frequently near Arroyo Seco Focus sites. They usually consist of several small, one-, two-, and three-room house-units, scattered irregularly about with no obvious plaza. The dominant pottery type is Jornada Brown, but Chupadero Black-on-White also occurs in quantity, and San Francisco Red is a strong minor type. The Claunch Focus appears to have no successors. Later Brownware foci, as such, have not been found, and Jornada Brown pottery begins to appear in dominantly Puebloan foci.

The Arroyo Seco Focus, on the other hand, appears to be a forerunner of the later Puebloan foci in the area. The type site is a pure Chupadero Black-on-White site, located on a high point above the narrow canyon of the Arroyo Seco, almost at its headwaters. It is a well-planned village in a long rectangular pattern, with a plaza in the center. Walls still stand nine feet high in places.

The Gran Quivira Focus seemingly amalgamates some of the Brownware traits into a basically Puebloan context. Jornada Brown pottery is one of the dominant types along with Chupadero Black-on-White. The ceramic inventory becomes quite varied by intrusives, and the glaze paint series in its earliest stage, Glaze A, is also a major pottery. Ceramic evidence would suggest a joining together of Brownware peoples with the culturally dominant Puebloans at this time and general acceptance of outside traits by the group. The type site is a small, square ruin a few hundred feet south of the main ruins of Gran Quivira. The rooms surround four sides of a plaza and are typical of the well-organized Puebloan building layout.

The type site of the Pueblo Colorado Focus is a small ruin (Laboratory of Anthropology Site No. 2081) situated one mile southwest of the larger Pueblo Colorado site on the summit of a butte. Like sites of the Gran Quivira Focus, sites of this focus are usually situated in easily defended locations. In Pueblo Colorado Focus sites, the first of the Tabira Black-on-White pottery and new glaze-polychrome types appear. Jornada Brown pottery continues to be a major type. The village is laid out in an irregularly patterned cluster of unit-type structures of five to thirty rooms each, and has one or more irregular plazas.

The Pueblo Pardo Focus type site is a late stage of that focus and is apparently, in part, contemporaneous with the early stages of the Salinas Focus. It is characterized by the irregular unit structure pattern with multiple, irregular plazas. Tabira Black-on-White pottery has by this time, dominated over the parent Chupadero Black-on-White, and a great many Rio Grande types are intrusive in the inventory. Jornada Brown still retains its popularity.

The fully historic Salinas Focus is defined largely on the basis of excavations at the Spanish mission of San Gregorio de Abo, and admittedly, little attention was given in these excavations to the Indian ruins. However, the regular building pattern, with plaza, is noted, and the pottery is principally Tabira Black-on-White; Tabira Polychrome appears, late glaze paint ware, and Spanish-influenced pottery.

Bibliography

ALBERT, J. W.
1847. Report of Lieutenant J. W. Abert of his Examination of New Mexico in the Years 1846 and 1847. Executive Documents of the 32nd Congress, Number 41.

ALVES, E. E.
1932. A Small Ruin in New Mexico. Texas Archeological and Paleontological Bulletin, No. 4.

ANONYMOUS
1944. Test Excavations at Quarai. El Palacio, Vol. 51, p. 221.

BAKER, ELE M.
MS/ Report of Stratification Tests at Quarai. Department of Anthropology, University of New Mexico.

BANDELIER, ADOLF F.
1892. Final Report of Investigations Among the Indians of the Southwestern United States. Volumes 1 and 2. Cambridge.

BATES, ROBERT L., RALPH H. WILPOLT, ARCHIE J. MacALPIN and GEORGES VORBE
1947. Geology of the Gran Quivira Quadrangle, New Mexico. Bulletin 26, New Mexico Bureau of Mines and Mineral Resources.
BLOOM, LANSING B.
1927. New Mexico. American Anthropologist, n. s., Vol. 29, pp. 317-318.
1940. Gran Quivira. New Mexico Historical Review, Vol. 15, pp. 98-99.
BOLTON, HERBERT E.
1916. Spanish Explorations in the Southwest, 1542-1706. New York.
BRADFIELD, WESLEY
1929. Excavations in the Sacramentos. El Palacio, Vol. 27, nos. 1-7.
BREW, J. O.
1944. On the Pueblo IV and on Katchina-Tlalac Relatives. In: El Norte de Mexico y El Sur de Estados Unidos, Tercera Reunion de Mesa Redonda sobre Problemas Antropologicos de Mexico y Centro America. 25 de Septembre de 1943, pp. 241-245. Sociedad Mexicana de Antropologia. Mexico.
CARLETON, JAMES H.
1855. Diary of an Excursion to the Ruins of Abo, Quarra, and Gran Quivira..... Ninth Annual Report of the Smithsonian Institution for 1854, pp. 296-316.
CHAPMAN, K. M.
1926. An Archeological Site in the Jornada del Muerto. El Palacio, Vol. 20, no. 6.
1927. A Feather Symbol of the Ancient Pueblos. El Palacio, Vol. 23, pp. 526-540.
COLTON, HAROLD S.
1939. Prehistoric Culture Units and Their Relationships in Northern Arizona. Bulletin 17, Museum of Northern Arizona.
COLTON, HAROLD S., and L. L. HARGRAVE
1937. Handbook of Northern Arizona Pottery Wares. Bulletin 11, Museum of Northern Arizona.
COSGROVE, C. B.
1947. Caves of the Upper Gila and Hueco Areas in New Mexico and Texas. Papers of the Peabody Museum of American Archeology and Ethnology, Vol. 24, no. 2.
COSGROVE, H. S., and C. B.
1932. The Swarts Ruin: A Typical Mimbres Site in Southwestern New Mexico. Papers of the Peabody Museum of American Archeology and Ethnology, Vol. 15.
ELY, ALBERT G.
1935. The Excavation and Repair of Quarai Mission. El Palacio, Vol. 39, pp. 133-144.
FERDON, EDWIN N., Jr., and ERIK K. REED
1950. A Pit-house Site Near Belen, New Mexico. El Palacio, Vol. 57, pp. 40-41.
GLADWIN, HAROLD S., EMIL W. HAURY, E. B. SAYLES and NORA GLADWIN
1937. Excavations at Snaketown: Material Culture. Medallion Papers No. 25. Gila Pueblo.
GLADWIN, WINIFRED and HAROLD S.
1934. A Method for the Designation of Cultures and Their Variations. Medallion Papers No. 15. Gila Pueblo.
GREEN, EARL
1955. Excavations Near Gran Quivira, New Mexico. Bulletin of the Texas Archeological Society, Vol. 26, pp. 182-185.
HACKETT, CHARLES W. (Editor)
1937. Historical Documents Relating to New Mexico, Nueva Vizcaya, and Approaches Thereto, to 1773. Vol. 3. Carnegie Institution of Washington Publication 330.
HALSETH, ODD S.
1926. Fieldwork at Gran Quivira, 1926. El Palacio, Vol. 21, pp. 223-226.
HAMMOND, GEORGE P., and AGAPITO REY
1927. The Gallegos Relation of the Rodriguez Expedition to New Mexico. Publications in History, Vol. 4. Historical Society of New Mexico.
1929. Expedition into New Mexico Made by Antonio de Espejo; 1582-1583: as revealed in the journal of Diego Perez de Luxan, a member of the party. The Quivira Society, Vol. 1, Los Angeles.
1940. Narratives of the Coronado Expedition. Coronado Historical Series, Vol. 2. Albuquerque.
1953. Don Juan de Onate, Colonizer of New Mexico, 1595-1628. Coronado Historical Series, Vols. 5 and 6. Albuquerque.
HAURY, EMIL W.
1936a. Some Southwestern Pottery Types, Series IV. Medallion Papers, No. 19. Gila Pueblo.
1936b. The Mogollon Culture of Southwestern New Mexico. Medallion Papers No. 20. Gila Pueblo.

HEWETT, EDGAR L.
1917. Note on Excavation at Quarai in 1913. Organic Acts and Administrative Reports of the School of American Archeology from 1907-1917, pp. 139-140. Santa Fe.
1923. Verbal Report by Director Edgar L. Hewett on Season's Work. El Palacio, Vol. 15, pp. 78-81.
1924a. Statement of the Director. El Palacio, Vol. 16, pp. 1-2.
1924b. Excavations During 1924. El Palacio, Vol. 17, p. 270.
1925. In the Field. El Palacio, Vol. 19, p. 14.
1926. Work at Gran Quivira. El Palacio, Vol. 21, pp. 217-218.
1927. Annual Reports for 1923-1924. Organic Acts and Administrative Reports of the School of American Research from 1918 to 1927. pp. 85-88, 99-100. Santa Fe.

HURT, WESLEY R., Jr., and HERBERT W. DICK
1946. Spanish-American Pottery from New Mexico. El Palacio, Vol. 53, pp. 280-288, 307-312.

JENNINGS, J. D.
1940. A Variation of Southwestern Pueblo Culture. Technical Series No. 10, Laboratory of Anthropology.

KELLY, ISABEL
1944. West Mexico and the Hohokam. In: El Norte de Mexico y El Sur de Estados Unidos, Tercera Reunion de Mesa Redonda sobre Problemas Antropologicos de Mexico y Centro America, 25 de Agosto a 2 de Septiembre de 1943. Pp. 206-222. Sociedad Mexicana de Antropologia. Mexico

KIDDER, ALFRED V.
1931. The Pottery of Pecos, Volume I. Papers of the Phillips Academy Southwestern Expedition, No. 3. New Haven.
1932. The Artifacts of Pecos. Papers of the Phillips Academy Southwestern Expedition, No. 6. New Haven.

KIDDER, ALFRED V., and ANNA O. SHEPARD
1936. The Pottery of Pecos, Volume II. Papers of the Phillips Academy Southwestern Expedition, No. 7. New Haven.

KUBLER, GEORGE
1939. Gran Quivira-Humanas. New Mexico Historical Review, Vol. 14, pp. 418-421.

LAMBERT, MARJORIE F.
1954. Paa-ko, Archaeological Chronicle of an Indian Village in North Central New Mexico. Monograph 19, School of American Research.

LEHMER, DONALD J.
1948. The Jornada Branch of the Mogollon. Social Science Bulletin No. 17, University of Arizona.

LEWIS, THOMAS H.
1950. Some Artifacts from the Tularosa Basin of New Mexico. El Palacio, Vol. 57, pp. 198-203.

MAGOFFIN, RALPH V. D.
1929. Excavations in New Mexico. El Palacio, Vol. 26, nos. 9-12.

MARTIN, PAUL S., and ELIZABETH S. WILLIS
1940. Anasazi Painted Pottery in Field Museum of Natural History. Anthropology Memoirs, Vol. 5. Field Museum of Natural History.

MERA, H. P.
1931. Chupadero Black-on-White. Technical Series No. 1, Laboratory of Anthropology.
1932. Wares Ancestral to Tewa Polychrome. Technical Series No. 4, Laboratory of Anthropology.
1933. A Proposed Revision of the Rio Grande Glaze Paint Sequence. Technical Series No. 5, Laboratory of Anthropology.
1935. Ceramic Clues to the Prehistory of North-Central New Mexico. Technical Series No. 8, Laboratory of Anthropology.
1938. Reconnaissance and Excavation in Southeastern New Mexico. Memoirs No. 51, American Anthropological Assn.
1940. Population Changes in the Rio Grande Glaze-Paint Area. Technical Series No. 9, Laboratory of Anthropology.
1943. An Outline of Ceramic Developments in Southern and Southeastern New Mexico. Technical Series No. 11, Laboratory of Anthropology.

PARSONS, ELSIE CLEWS
1939. Pueblo Indian Religion, 2 Volumes. University of Chicago Press.

PEPPER, GEORGE H.
1920. Pueblo Bonito. Anthropological Papers, Vol. 27. American Museum of Natural History.
REED, ERIK K.
1943. The Southern Tewa Pueblos in the Historic Period. El Palacio, Vol. 50, pp. 254-264.
1948. The Dating of Early Mogollon Horizons. El Palacio, Vol. 55, pp. 382-386.
1949. Sources of Upper Rio Grande Pueblo Culture and Population. El Palacio, Vol. 56, pp. 163-184.
SCHOLES, FRANCE V., and H. P. MERA
1940. Some Aspects of the Jumano Problem. Contributions to American Anthropology and History, Vol. 6, no. 34. Carnegie Institution of Washington Publ. 523.
SENTER, DONOVAN
1934. The Work on the Old Quarai Mission, 1934. El Palacio, Vol. 37, pp. 169-174.
SHEPARD, ANNA O.
1942. Rio Grande Glaze Paint Ware. Contributions to American Anthropology and History No. 39, Carnegie Institution of Washington Publ. 528, pp. 129-262.
STALLINGS, W. S., Jr.
1932. Notes on the Pueblo Culture in South-Central New Mexico and in the Vicinity of El Paso, Texas. American Anthropologist, n. s., Vol. 34, pp. 67-78.
STUBBS, STANLEY A.
1930. Preliminary Report of Excavations Near La Luz and Alamagordo, New Mexico. El Palacio, Vol. 29, no. 1.
STUBBS, STANLEY A., and W. S. STALLINGS, Jr.
1953. The Excavation of Pindi Pueblo, New Mexico. Monograph 18, School of American Research.
TOULOUSE, JOSEPH H., Jr.
1938. The Mission of San Gregorio de Abo. El Palacio, Vol. 45, pp. 103-107.
1940. The Mission of San Gregorio de Abo. El Palacio, Vol. 47, pp. 49-58.
1944. Cremation Among the Indians of New Mexico. American Antiquity, Vol. 10, pp. 65-74.
1945. The Early Water Systems at Gran Quivira National Monument. American Antiquity, Vol. 10, pp. 362-372.
1947. Some Observations on Spanish-American Pottery from New Mexico. El Palacio, Vol. 54, pp. 99-102.
1949. The Mission of San Gregorio de Abo: A report on the excavation and repair of this 17th century New Mexico Mission. Monograph No. 13, School of American Research.
MS/ History of the Salinas Province.
VAILLANT, GEORGE C.
1932. Some Resemblances in the Ceramics of Central and North America. Medallion Papers No. 12, Gila Pueblo.
VIVIAN, GORDON
1952. History From the Trash Dump. New Mexico Magazine, Vol. 30, no. 11, pp. 14-15, 43, 45. Santa Fe.
WENDORF, FRED
1956. Fragmentary Pueblo Near Corona, New Mexico. Highway Salvage Archeology, Vol. 2, pp. 87-105. Museum of New Mexico.
WENDORF, FRED, NANCY FOX and ORIAN L. LEWIS (Editors)
1956. Pipeline Archeology: Reports of Salvage Operations in the Southwest on El Paso Natural Gas Company Projects, 1950-1953. Laboratory of Anthropology and the Museum of Northern Arizona, Santa Fe and Flagstaff.
WOODBURY, RICHARD B.
1954. Prehistoric Stone Implements of Northeastern Arizona. Papers of the Peabody Museum of American Archeology and Ethnology, Vol. 34.


University of
Connecticut
Libraries